

# LITTELL'S LIVING AGE.

Fifth Series,  
Volume XXXI. }

No. 1892.—September 18, 1890.

{ From Beginning,  
{ Vol. XLVI.

## CONTENTS.

I. MIND IN THE LOWER ANIMALS, . . . . .	<i>Edinburgh Review</i> , . . . . .	707
II. ADAM AND EVE. By the author of "Dorothy Fox." Part XII., . . . . .	<i>Advance Sheets</i> , . . . . .	725
III. A FORGOTTEN EMPIRE IN ASIA MINOR, . . . . .	<i>Fraser's Magazine</i> , . . . . .	736
IV. A TALK ABOUT SONNETS, . . . . .	<i>Blackwood's Magazine</i> , . . . . .	743
V. THE PORTRAIT OF A PAINTER BY HIMSELF. By Lady Pollock. Part II., . . . . .	<i>Temple Bar</i> , . . . . .	754
VI. SPECTACLES, . . . . .	<i>Saturday Review</i> , . . . . .	760
VII. COLORS IN ART, . . . . .	<i>Nature</i> , . . . . .	763
VIII. ÆSTHETIC TEAS, . . . . .	<i>World</i> , . . . . .	766
IX. L. F. DE POURTALES. By Alexander Agassiz, . . . . .	<i>Nature</i> , . . . . .	767

## POETRY.

FANCIES, . . . . .	. 706   TO MY WIFE, . . . . .	706
MISCELLANY, . . . . .	768	

PUBLISHED EVERY SATURDAY BY  
LITTELL & CO., BOSTON.

## TERMS OF SUBSCRIPTION.

For EIGHT DOLLARS, remitted directly to the Publishers, the *LIVING AGE* will be punctually forwarded for a year, *free of postage*.

An extra copy of *THE LIVING AGE* is sent gratis to any one getting up a club of Five New Subscribers.

Remittances should be made by bank draft or check, or by post-office money-order, if possible. If neither of these can be procured, the money should be sent in a registered letter. All postmasters are obliged to register letters when requested to do so. Drafts, checks and money-orders should be made payable to the order of *LITTELL & Co.*

Single Numbers of *THE LIVING AGE*, 18 cents.

## FANCIES.

BY THE AUTHOR OF "MRS. JERNINGHAM'S JOURNAL."

## I. — EILY.

WHEN the stars sing lullabies,  
Eily may lie down to rest ;  
Not more innocent the skies,  
Than the heart within her breast.

Balmy breeze and dropping dew  
Are not fresher than is she ;  
All the earth, and heaven too,  
Are not dearer unto me.

Slumber is death's counterfeit :  
When the spell is o'er her laid,  
Looks she so divinely sweet,  
That of death I am afraid.

If she dies, I'll bury her  
Where the whitest blossoms grow ;  
Or, perchance, she would prefer  
For her grave, a mound of snow.

Waiting for a solemn hush,  
Bursting into sudden song,  
I will tame the sweetest thrush  
Singing for her, loud and long.

But the bird will only sing  
Over a deserted mound,  
And my flowers I shall fling  
Only on an empty ground.

For my Eily will have flown  
To the land I cannot see,  
And the heart that is mine own  
Will be beating there for me.

If she dies, a dull despair  
Will eclipse the green and blue ;  
But for me, I shall not care —  
If she dies, I shall die too !

## II. — AWAKE.

The sun gets up in the morning  
And lifts his stately head ;  
Open your eyes, my sleepy skies,  
The sun is out of bed !  
The moon is very timid,  
She dare not meet the sun,  
With a heigh-ho ! the stars must go,  
And hide themselves one by one.

The sun gets up in the morning,  
The world is all alight ;  
Every tree is full of glee,  
Every blossom bright ;  
Every bird is singing  
A welcome to his king,  
With a well done, beautiful sun !  
You glorify everything.

The sun gets up in the morning,  
And so must children too ;  
How dare you keep fast asleep,  
The sun is calling you !

Mid all the birds and blossoms  
Your merry voices raise :  
With a hurrah ! How glad we are  
We have got a sun to praise !

Good Words.

## TO MY WIFE.

## A VALENTINE.

BEAUTIFUL day, oh, beautiful day !  
There's not a cloud on the rim of heaven,  
Except to the westward, far away,  
Three little islands, rent and riven,  
Three little isles of fleecy white  
Bathing themselves in the rosy light.  
And the wind blows balmy from the south,  
As it had kissed the summer's mouth,  
And told to all, the heartless rover,  
How sweet, how gracious was his lover.

Beautiful, beautiful, beautiful day !  
Bright as our bonnie English May ;  
Yet lacking something — hard to tell —  
I know not what — but feel it well,  
Present, although ineffable.  
Is it that here condemned to roam,  
I sigh for the colder skies of home ?  
Perhaps ; yet I am grateful still  
For the privilege to breathe at will  
This buxom and rejoicing air  
That bathes the bright world everywhere ;  
To see the palms and orange growing,  
And nature all her boons bestowing.

Ah, no ! not all ! 'tis fair to see ;  
Yet something fails ; what can it be  
That I, not difficult to please  
In the beauty of the grass and trees,  
Have found a void, ye lovely hours,  
In the fair splendor of the bowers ?

Unsatisfied ! unsatisfied !  
I miss the white amid the green ;  
I miss the flowers — the daisies pied,  
And cowslips peering up between ;  
I miss the song of the twinkling lark —  
Soaring, soaring, and singing ever,  
From the dawning till the dark,  
The song unborn of an endeavor,  
But gushing from his happy voice  
As freely as from morning sun  
The light that bids the world rejoice  
In the new gladsomeness begun.

All these I miss this pleasant day ;  
All these and something more divine —  
Thy smile, dear Nelly, far away,  
Thy hand, sweetheart, to clasp in mine ;  
The voice oft heard from lips of thine,  
That breathes the words 'tis joy to hear  
Even in remembrance. Wanting these  
I bless the skies so balmy clear,  
The health and gladness on the breeze ;  
But miss my joy beyond the sea,  
And pine for England and for thee.

All The Year Round.

From The Edinburgh Review.

### MIND IN THE LOWER ANIMALS.\*

FEW books are more attractive and popular than those which treat of the habits and so-called instincts of animals. That the subject must be a fertile one for the enterprise both of investigators and authors, is at once evident from the consideration of the large number of species now known to naturalists. In the book which furnishes the chief suggestions for this article, nine hundred and fourteen distinct forms are named as having contributed to the author's generalizations. A comprehensive and really valuable list of one hundred and thirty-three works is given as authorities consulted upon this important as well as interesting department of scientific research. Dr. Lauder Lindsay has at any rate chosen a field of investigation which needs no extraneous argument to commend it to the attention of intelligent thinkers and kindly-hearted men; and we therefore proceed to bring the conclusions at which he has arrived, and the method which he has pursued in the prosecution of his labors, under the notice of our readers. We think that some of the facts which he has catalogued and indexed in his voluminous book, and the deductions which he conceives himself to have established, deserve to be presented in a more readable form than that which he has adopted in his loosely compacted memoir, where, in one instance, sixteen columns and a half are occupied by three hundred and twenty-eight distinct epithets that he finds to be necessary to express the modifications of language by speechless animals, and where, in numerous cases, page after page is filled by analytical statements which look very much like the terrible tables employed by the modern expositors of the natural system of botany. Whatever may be the advantage of this method of treatment where erratic and puzzling forms of visible structure have

to be explained, it must be admitted that it does not constitute attractive reading when broad abstractions have to be dealt with, and when a continuous argument has to be framed. In connection with this remark it may not be out of place to say that an elaborate index of seventy-three pages is one of the notable features of the work, and that this has been avowedly provided by the author at the cost of several months' close application and labor. It might be wished that a portion of the time which has been devoted to this most copious index had rather been applied to the elaboration of the book itself.

The author of "Mind in the Lower Animals in Health and Disease" explains that he was first led to the consideration of this subject by an investigation which he undertook twenty years ago to determine how far the diseases of the lower animals may be held to be identical with those of man. The prosecution of this enquiry, of course, comprised a close observation of the healthy manifestation of mind. Dr. Lindsay appears to have been especially qualified for this part of his task by a long experience in the management of the Murray Royal Institution for the Insane, near Perth. He has enjoyed the further advantage of a wide sphere of travel, extending through Iceland, Spain, Italy, Morocco, Egypt, Syria, the United States, Canada, Australia, and New Zealand, and during his wanderings has always had an eye upon the four-handed, four-footed, winged, and many-legged creatures that he came across. He also appears to have an intimate acquaintance with the principal zoological gardens and menageries of the world, and, besides this, to have devoted his leisure for many years to reading books which relate to the habits of animals, and to making copious notes from them. Upon these several grounds Dr. Lindsay comes before his readers armed with attainments and credentials which entitle him to attentive consideration.

But the author of "Mind in the Lower Animals" furthermore assures his readers that he has studied his subject without any preconceived views or theories to

\* 1. *Mind in the Lower Animals in Health and Disease.* By W. LAUDER LINDSAY, M.D., F.R.S.E., F.L.S. London: 1879.

2. *Etudes sur les Facultés mentales des Animaux comparées à celles de l'Homme.* Par J. C. HOUZEAU, Membre de l'Académie de Belgique. Mons: 1872.

support; that he has confined his generalizations within altogether safe limits; that he has avoided all discussion of such unmanageable topics as brute immortality and soul; and that he has simply presented the conclusion which results from his facts. All this seems to indicate a very desirable disposition for an observer who ventures upon so wide and difficult a field, and the promise which it implies might be at once accepted with ready faith if it were not for the provoking circumstance that it points to just the frame of mind which all philosophic authors believe themselves to possess. On this account it becomes necessary to take some little note, in the first instance, of the way in which Dr. Lindsay has proceeded to carry out his purpose and design.

The main proposition which he aspires to establish is that mind is the same thing in the lower animals that it is in man, and that there are no mental faculties in man which have not their full counterpart in what have been erroneously termed "the lower animals." The author himself says: —

Man's claim to pre-eminence on the ground of the uniqueness of his mental constitution is as absurd and puerile, therefore, as it is fallacious. His overweening pride or vanity has led to his futile contention with the evidence of facts. He has trusted to a series of gratuitous *assumptions*. The supposed criteria of human supremacy, as the preceding chapter has shown, the alleged psychical distinctions between man and other animals, cannot stand examination. One after another they have proved to be fallacious, built upon unsatisfactory grounds.

At the end of the paragraph from which this extract is taken Dr. Lindsay further remarks: —

That man's specific designation then — *Homo sapiens* — is far from being deserved or appropriate becomes obvious when we compare him in his lowest savage or primitive condition with such other animals as the dog or the ant.

It will be observed that in this passage Dr. Lindsay implies that man does not deserve his imputed reputation for superior wisdom because in his lowest state he is inferior to such sagacious animals as the dog and the ant. This particular

clause of the argument is worthy of pointed notice, because it is a turn of thought which crops up again and again, and which indeed is so frequently expressed, that it virtually becomes the keynote of the performance. Thus the dog, horse, elephant, parrot, and ape in psychical capacity are often superior, it is said, to the human child, and even to the human adult. The naturally intelligent and well-trained dog is mentally and morally higher than the human infant and child, and frequently also than the full-grown man. Any definition of morality, moral sense, or religious feeling, which is so framed as to exclude the lower animals, must also exclude entire races and ranks of men. Particular definitions of religion are more appropriate to the state of the dog than of the savage. The despised ass is often too clever for stupid man. Women have sometimes much to learn in the matter of dress from birds. Twenty-seven of the virtues of man, beginning with heroism, patriotism, and self-sacrifice, and ending with knowledge and due performance of professional occupation, are specified in which the lower animals exhibit a superiority to whole races or classes of men, whether civilized or savage. The real tendency of this line of argument, of course, is to show that the worst forms of humanity are lower than the brutes. But the impression sought to be conveyed to the reader is that the lower animals must be mentally the equals of man because they are superior to him sometimes. This is a very amusing instance of what is commonly called begging the question, and may possibly and fairly suggest a doubt whether the author of these ingenious passages is as entirely without a preconceived view as he supposes himself to be. The language in these instances certainly savors more of plausible advocacy than it does of a philosophical and unbiased search for truth.

But when the reader passes on to examine the very numerous instances of the sagacity of animals which have been here collected together to establish their mental equality with man, the impression that Dr. Lindsay must be somewhat facile of

belief for so experienced an investigator is added to the suspicion that there is a bias in his reasoning. He is, in fact, the most credulous philosopher we remember to have met with. A few chance illustrations of this capacity for swallowing strange stories may be advantageously glanced at. From one paragraph it appears that ships are signalled off the coast of Tahiti, by the crowing of the cocks, long before they are in sight, and that this occurs with such regularity and certainty that the pilots, both native and French, forthwith proceed out to sea to meet the ships whenever they hear the crowing, and do find them in the *offing without any exception*. Then, again, a small dog, which had been assaulted by a large one, saved up its rations day by day, and at last gave a dinner to a number of his dog friends, and by that means secured their services to avenge his injuries by worrying the bully who had attacked him. A terrier dog upon one occasion roused his master's household in the middle of the night to point out that a bolt on the front door had not been duly fastened. Certain swallows, which had played a successful practical joke upon a cat, set up a laugh at the disappointed enemy "very much like the laugh of a young child when tickled." A Skye terrier, whenever he wished to be particularly jovial, used to enter so thoroughly into the necessities of the situation, that "his sides shook with convulsive laughter." A dog and cat, which were confederates for dishonest purposes, had an understanding together that the cat should give notice, by mewing, when the coast was clear, and the two then proceeded to the larder, where the cat, availing herself of her superior scansional powers, climbed to the shelf and held the cover of a dish raised with one paw, whilst with the other she distributed his share of the plunder to the dog below. A young rat having fallen into a pail of pig-food, six older ones held an earnest consultation as to what should be done in the emergency, and having settled their plans formed themselves into a chain, and so dropped the lowest one of the series down into the pail until he could get hold of the

drowning young one. This having been accomplished, the chain was drawn up by the rats above. But the attempt at rescue proved to be too late. The young rat was dead. The disappointed elder ones thereupon first gazed at their young comrade in mute despair, then *wiped the tears from their eyes with their fore-paws*, and sadly walked away. The human witnesses of this touching occurrence do not say that the old rats made any attempt to carry out the instructions of the Royal Humane Society, but the sagacious animals no doubt would have done so if they had not been aware, through the operation of their superhuman intelligence, that their interposition had come too late. A big dog, whose fine moral nature happily had not been much tampered with by human agency, when he saw a canary chased by a cat, opened his mouth wide and afforded the fugitive bird a safe refuge from the feline claws within his own protecting jaws. Another dog, who had heedlessly soiled the floor by running across it with his mud-covered feet, immediately set matters straight by scraping up all the mud with his teeth. A Newfoundland dog kept his pocket-money under the mat, and took from it a half-penny or a penny, according to the urgency of his appetite. He was quite aware of the value of his coins, and occasionally changed pennies and sixpences, taking care that only the proper value of his purchases was deducted. Two other dogs of a similar turn of mind, who were wide awake to human depravity and tricks, always kept their paws upon their pennies until they had got their buns; and another dog, who had once been deceived by a baker of whom he had expected better things, not only transferred his custom to a rival establishment on the opposite side of the way, but *always* called first at the deceiver's door to show him the money he was going to spend, and to keep him alive to the fact of the valuable custom he had forfeited. The horse which used to pump its own water and drink from the spout, and the cow which was in the habit of slicing its own turnips, may possibly be almost too commonplace to be worthy of special notice; but this can

hardly be held to be the case in the matter of the dog, who after a severe fight went home, and took to his master's bed, first making it up comfortably, and then getting in between the sheets and laying his bruised and wounded head upon the pillow. This dog, however, was not quite so conspicuous for delicacy of feeling as he was for intelligence; for he neglected to wash himself before he went to bed, and so allowed both the blood and the mud from his coat to soak into the sheets. A fox-terrier was cured of an inveterate habit of thieving by having his pilferings always restored to their proper owners in his presence. The bulldog who brought a companion with a broken leg to the surgery where he had seen his master's injured leg dressed, and who scratched at the door until it was opened, and then formally introduced the patient, must have been a pleasant dog to know; but scarcely more so than the injured dog himself, for he at once held up his damaged fore-leg to indicate the nature of his hurt. The surgeon concerned in these cases appears to have enjoyed a good practice amongst the dogs, for another shortly afterwards came to him with a pin sticking in one of his legs, and asked to have it extracted. It is not actually stated that either of these dogs offered the surgeon his proper fee, but, in the face of their quite unexceptionable behavior in other points, it must be hoped that they did so. An Eskimo dog, called Fire King, had not quite so clear a sense of the beneficent influence of the healing art, for he could not be induced to submit his broken leg to the manipulations of the veterinary surgeon until he had seen his master go through the pantomimic performance of having a broken leg dressed and cured. Dogs and cats, it is affirmed, physic themselves much more rationally than the majority, at least, of most civilized men and women. It can scarcely be necessary to extend this series of illustrations further than has been done. But there is still one final instance which must be told in Dr. Lindsay's own words, to give full force to the caution which it conveys.

There is a very distinct appointment, and by a kind of universal suffrage, where the street dogs of Constantinople, as they sometimes do, select as their leader some animal belonging to a different quarter of the town—from among their natural enemies therefore—the motive for such a choice being *signal bravery* displayed by the favored individual, either in attack or defence. There are certain other

*official appointments*, both of a public and private kind, in which selection may or may not be made by and from the general body of a community, and with or without prominent candidature, or candidature or competition at all by the individual selected. Thus there must be some sort of appointment, by selection of the fittest, in the case of

1. Mayors of towns.
2. Commissioners or ambassadors.
3. Spies or scouts.
4. Sentinels, sentries, or outposts.
5. Nurses.

It is necessary to state in reference to these illustrations that Dr. Lindsay's remarks, in regard to some two or three of them, that the incidents recorded *may* possibly require verification; but the fact nevertheless remains that by far the greater part of them have been unreservedly accepted by an enquirer who prides himself on his habit of generalizing only upon safe scientific grounds.

Dr. Lindsay selects, from the nine hundred and fourteen species of animals which have engaged his attention, the dog as the one which stands *facile princeps* near to man in moral and intellectual excellence, and he marks the elephant, the anthropoid ape, the parrot, and the ant as approaching most nearly in this particular to rivalry with the dog. He thinks, however, that the supremacy of the dog over the anthropoid ape may be properly ascribed to the domestic life which the dog leads in the companionship of man, and to the advantages which it enjoys in this connection; and that, if the anthropoid apes were to receive the same education, they might possibly surpass the dog in mental attainment. Dr. Lindsay is assuredly right in his assumption that much of the intelligence and charm of the dog must be attributed to the circumstance that it associates itself so readily and so closely with man. Monkeys have never received anything like the same attention and care, and no one can venture to say what they might not become if they were once permanently domesticated in human households, as the dog is. For the present, however, on account of his long-established and almost universal domestication, the most remarkable and instructive of the studies of animal intelligence have been furnished by the dog, and he accordingly figures most largely in these pages. "The mental and moral qualities, the virtues and vices, and the accomplishments of the dog are referred to," as the author himself says, "in almost every chapter of the book."

In the comprehensive abstract of the high mental attributes of the dog, which is given in the usual tabulated form, it is stated that the understanding of man's language is made to include the interpretation of facial expression, and the reading of human character and mood. This power the dog certainly possesses in a very remarkable degree. In a recent number of this journal, in which the mathematical attainments of Dr. Huggins's mastiff Kepler were brought under notice, the quickness of the dog in catching the unconscious indications of his master's eye, as he worked out the successive steps of the calculation, was alluded to. M. Houzeau, the director of the Royal Observatory at Brussels, and the author of an interesting book on the mental faculties of animals, refers to this keenness of observation in the dog as enabling it at once to perceive the intentions of its master in something unusual in his look, manner, or actions; and Dr. Lindsay ascribes the presentiment or pre-  
vision attributed to the dog to this closeness of observation and never-failing habit of watchfulness. There are few persons who have not been at some time impressed with the marvellous expression of the eye, countenance, and bearing of an intelligent dog, when it is engaged in this way in the intense and concentrated study of its master's face. Miss Cobbe barely treads upon the outskirts of figurative exaggeration when she refers to the dog as actually "speaking with its eyes." Professor Ferrier effectively demonstrates, however, that it is the bark of the dog which is the equivalent of human speech, since he produces it automatically by the electrical irritation of the same part of the brain which rules over the faculty of language in man. At any rate, there is not any difficulty in conceding that the dog does talk with its master after a fashion of its own, and that, where there is a proper understanding and due sympathy between the parties, the conversation is carried on with the happiest results.

The memory of the dog is scarcely less strongly marked than its powers of observation, and in all probability is the part of its mental activity to which its hereditary acquirements must be primarily traced. The canine brain not only takes the mould of the sensual impacts which are pressed upon it, but also tends to reproduce the exact impressions which it has itself received in succeeding offspring. The specific characters of the different races and

breeds, which are the subject of artificial and careful training by man, are dependent upon this permanent moulding of the vesicular substance of the brain. It is most probable that some of the characteristics of the dog which are liable to be interpreted in a different way might be more reasonably referred to this influence. Thus the instance which Dr. Lindsay draws upon to give point to his admission that it is in the bounds of possibility a dog may be as stupid as a man, might fairly be looked at in this way. He tells of a case in which, a man having dropped a small parcel on the road, his dog remained behind and watched it for hours, and probably would have done so for days if the man had not returned to pick it up, although it could so easily have taken the parcel between its teeth and followed its master, to the saving of time, trouble, and anxiety on both sides. Dr. Lindsay's reflection upon this incident is to the effect that there was here an absence of the sagacity which so generally belongs to the dog, and that this individual animal was weak in its reflective powers, and therefore not competent to deal with the emergency in which it found itself placed. But upon the face of the matter it seems very doubtful indeed whether this grave reproach is deserved. The probability is that the dog was strong in an acquired faculty rather than weak in reflection, and that it was practising upon the bundle a lesson which it or some of its ancestors had been taught in the case of birds, which are objects to be watched and not touched until the proper fiat is issued. Plato amusingly remarks that the dogs of Athens had a look of impertinence about them which was not observed in those of Sparta. This, of course, must have been due to the influence of the Athenian habit of life upon the canine brain. The dog which watched its master's clothes for him whilst he was bathing, and which would not allow him to resume his garments when he returned to dress, because he came for them naked, must be admitted to have shown deficiency in the power of apprehending all the conditions that are involved in the civilized habit of wearing clothes. But this dog, too, might have possibly had some confusion in its mind between the bundle of cast-off clothes lying on the sand and the partridge lurking in the stubble.

Mr. Douglas Spalding, who has contributed some articles on instinct to *Macmillan's Magazine* and to *Nature*, looks upon hereditary transmission as

serving, in some measure, the purpose of a permanent record of observation, reflection, and experience. He holds that the brain and nervous system in the lower animals constitute an organized register of ancestral knowledge, and that each individual does in that way receive some benefit from the wisdom of its ancestry. The well-known inheritance by dogs of dislike to butchers is perhaps one of the most familiar and most thoroughly established instances of this perpetuation of a cerebral impression. It was singularly well marked in Dr. Huggins's dog, Kepler, and was commented upon as a good illustration of inherited antipathy by Mr. Darwin in a communication to *Nature*. It was first manifested by Kepler when he was much too young to have been himself the victim of any punishment at a butcher's hands, which is probably the primary source of this peculiarity in most cases. Dr. Huggins discovered the trait on taking the dog out whilst still a puppy. Kepler exhibited extraordinary signs of distress and terror whenever he approached a butcher's shop, and upon one occasion threw himself down on the ground and refused absolutely to pass the place. Dr. Huggins wrote to the person from whom he had purchased the dog to ask whether he could throw any light upon the matter, and then learned that it was a characteristic which was equally pronounced in Kepler's father and grandfather, and which was so strong in one of his brothers that the dog never failed to fly at any butcher who chanced to cross its path, even if at the time in plain clothes. The mere influence of smell cannot be accepted as a sufficient reason for this antipathy, since no one could suspect a dog of even Kepler's refinement of having a repugnance to raw meat.

The dog is marked out from all the rest of the lower animals by the extraordinary diversity of character which it presents. This again is a quite natural result of the domestic life which it leads in the companionship of man. That domestication does exert a very considerable power upon canine character is proved by the notable circumstance that the mongrel and the cur, the mere hangers-on of the household, possess greater versatility and variety of character than the nobler dogs of special training. As Dr. Lindsay says, the indifferent cur is accustomed to put its paw into everything, and on that account surpasses noble breeds in performing miscellaneous services. A good

sheep-dog, on the other hand, attends to nothing else but the particular branch of business to which it has been bred. Its whole capacity is exerted and exhausted on that, and, whilst it performs that to admiration, is of little avail in the promiscuous matters in which a mongrel readily makes its mark. Sheep-dogs are all pretty much alike, but every petted house-dog has a distinct individuality of its own. A large black dog, who was for many years a valued acquaintance and friend of our own, and who answered to the name of Carbo—which was, however, conferred upon her primarily not on account of her coal-blackness, but for another reason—devoted her life to loving attendance upon children, although there were none in the household to which she belonged. Her mornings were invariably spent for many years in accompanying the nursemaids of the neighborhood in their periodical walks, carrying the children's baskets and hoops, and making herself generally useful and agreeable to the party until she had seen them safe home at midday. She then took an hour for her own concerns, and presented herself at her own home at the servants' dinner. But this business having been transacted, she started off again, and at three o'clock was demurely waiting at the door of another neighbor's house, where the children took their airing in the afternoon. With these the same proceedings were repeated, in this case one of her juvenile friends not unfrequently riding upon her back. Carbo had a big son as black as herself, who was named Bounce on account of the rushing impetuosity of his movements and the general loudness of his demeanor. Bounce, in the midst of his strong self-assertion, had inherited his mother's kindness of nature, but, oddly enough, was contemptuous about children, and would have nothing to do with his mother's daily promenades. Instead of wasting his regards upon extraneous society, he loyally kept them all for the proper members of his master's house—the servants, and the pets that shared his board and bed. A parrot, of whom more will presently be said, used habitually to feed with Bounce out of the same bowl, and, whenever perchance there was a choice bone in the mess, it always fell to Polly's share, and she was allowed to carry it off without a word of either remonstrance or resentment. As in too many instances, as Dr. Lindsay would say, of "human depravity," these dogs, notwithstanding their high gifts, did not ful-

fil in the end the promise of their early days. Carbo was led away by her craving for cheerful society and the fascinations of her juvenile friends, and at last came to spending all her time at a newly-opened skating-rink, listening to the band, and holding light conversation with other frivolous frequenters of the place. Bounce, in his turn, took to rambling to longer distances, and was often absent for days without giving any proper account of his wanderings, and certainly does not appear to have shared the hereditary weakness of Kepler, for the last time anything certain was heard of him he seemed to have contracted some questionable relations with a butcher. If it were possible to get to the bottom of his eccentric behavior, it is most probable that he would prove a pertinent illustration of what Dr. Lindsay classes as moral insanity dependent upon perversion of the natural affections. Dr. Lindsay states that one of the most common forms in which this perversion manifests itself is capriciousness and inconstancy of attachments, companionships, or friendships, "whether between different individuals of a species, or between members of different species and genera." This surely must be the nature of Bounce's case. He is unfortunately suffering from an attack of moral insanity which has made him insensible to the just claims of a too indulgent master.

Dr. Lindsay's book, as a matter of course, overflows with notable instances of canine sagacity, of which many are curious and worthy of note, if only upon a suggestive ground. There is a case quoted from the *Animal World*, of the Royal Society for the Prevention of Cruelty to Animals, in which a dog, who had surreptitiously eaten some shrimps intended by the cook for the sauce of his master's dinner, never afterwards could face the awkward question of "Who stole the shrimps?" but immediately slunk away with ears and tail down, a picture of shame and remorse. There need not be any difficulty in regard to the lodge-keeper's poodle which used to ring the bell for its master to open the gates whenever it saw a carriage approaching along the drive. But it is not quite so easy to understand the proceeding of the miller's dog that saved a companion from drowning by running along the bank of a river "until it got well below the drowning dog, and then sprang in and swam across, and so exactly calculated the rapidity of the river and his own speed that he intercepted it and brought it to land."

In such circumstances as those which are here described, it is quite clear that the miller's dog should have done nothing of the kind, because once he was in the stream he and the drowning dog must have been equally affected by the current. He must have had to swim up the current, as well as across, before he could reach the struggling animal which was the object of his solicitude. A good water-dog in all probability would not have made the mistake with which the miller's dog is here credited. The poor dogs, which are kept at the Grotto del Cane, near Naples, to exhibit the suffocating powers of the carbonic acid that exhales into the place, are certainly justified in the protest they make by slouching tail and hanging ears when their turn comes to submit to the cruel ordeal.

Two complete chapters in Dr. Lindsay's book are devoted to the consideration of the knowledge of numbers which the lower animals manifest. One of the best instances he adduces to establish for them a claim to the power of enumerating is taken from the pages of *Land and Water*, and relates to a sheep-dog which had learned to bring up the sheep to the washing-trough in detachments of ten, and which always spontaneously started off for a fresh supply whenever the number remaining in the pen had been reduced to three. The faculty of counting in this case would appear to have been pretty much upon a par with that of the savage races of men who cannot get beyond the number of their ten fingers. So far as some human savages are concerned, there is clear evidence in their language that the fingers have been their first tallies in counting. The Zulu kafir of south-eastern Africa still holds up the fingers of his hands, one after the other, as he counts, and gives an articulate name to each sign. "Nye," "bili," "tatú," "ne," and "thlanu" are the names which he attaches to the five digits of the first hand, beginning with the little finger, and ending with the thumb. He then passes on to the second hand, and begins with the thumb, and as he holds it up says, for six, "Tat' isé tupa;" that is, "Take the thumb." Seven is "kom-bile," or "point;" that is, with the fore-finger. Eight is either "ukulu," that is the "great" middle finger, or "thliya nga-lo-bili," "leave two fingers of the second hand;" and nine is "thliya-nga-lolunye," or "leave one." Unfortunately Kepler used the same word, or bark, for each number that he had to indicate, re-

peating it as a unit-symbol as often as the case required. He has not, therefore, left the same opportunity for ascertaining whether he connected his units with the number of his toes. If the dog does adopt this plan in common with the savage, it accounts for the facility with which the sheep-dog brought the sheep up to the shearing in tens. Dr. Bücher, of Darmstadt, says that the magpie can only count up to four, and that, if four men hide themselves before a magpie's eyes, it will remain on its guard until all four are gone away; but that if five men hide themselves, and four go away, it concludes the entire party is gone. Shall we be told this is because the magpie has only four toes to its feet?

Dr. Lindsay accepts the Baconian remark, that man is in many instances as a god to the dog, as being absolutely and literally true, and connects with it the inference that the religious feeling is frequently entertained by dogs "in a much higher degree, and in a much more real sense, than by countless thousands, and indeed whole races, of men;" and he argues that man's deification by the dog is very nearly akin to the idolatry which woman exercises towards man. He is, however, quite aware that there are two sides to the instance drawn from man, for he says that John Stuart Mill must have been an idolater, since the memory of his deceased wife was to him as a religion. Dr. Lindsay seems seriously to believe that the dog prays to man, and that very often the appeal is connected with a living sense of the vainness of its own efforts, and of its need of the help of a being higher than itself. The dog has, however, its grovelling superstition also; for a dog on the Metropolitan Railway stood in such awe of drivers and stokers of locomotives that it prostrated itself before them, and then fawned upon them, and performed fetch by dancing round them, whenever it encountered them. Dr. Lindsay draws upon numerous cases in which dogs have become regular attendants at religious services on Sundays in support of his claim in their behalf for a religious sense. He alludes to various instances of astute dogs which have concealed themselves, or taken themselves out of the way, on Saturday, in order to avoid being kept from church on the Sunday; and he refers with manifest approval to Southey's story of the Methodist's dog which went to chapel in order to induce its irreligious master to follow it, and ceased to do so when its master was

accidentally drowned. He says of such dogs that it is obvious, "in many cases at least, they value church attendance as a privilege, for which they are prepared to make, and do make, great sacrifices." Rooks and crows do not appear to have the religious sense as strongly developed as dogs, for the raven in Shetland is more mischievous on Sundays than on any other days of the week. It is somewhat remarkable that Dr. Lindsay seems inclined to admit that this, in the case of ravens, may be because the human inhabitants of the place are very regular in their attendance upon the religious services of the day, and so leave the birds more free to act upon their evil propensities.

Dr. Lindsay entirely dissents from Mr. Mill's doctrine, which is also shared in the main by Max Müller, that the understanding of language is a distinctive quality of man. He admits that there is no evidence "of a printed or written language amongst the lower animals," but he then characteristically adds, "neither is there amongst many of the races of mankind, whereas some of the lower animals do draw lines or figures, and make artificial marks, with their feet." He also insists that there is no real distinction between emotional and written language, that the one passes quite insensibly into the other, and that both are possessed in different degrees by other animals as well as man.

As soon, however, as the question of articulate speech amongst the lower animals is entered upon, that accomplished talker, the parrot, as a matter of course, comes to the front; and, in regard to its conversational powers, Dr. Lindsay holds that it is simply an error to regard this bird as learning to articulate or utter and to repeat words only by rote without attaching ideas to them, "as school-children often do," and that it is a libel on the intelligence of the parrot to reproach children with repeating their lessons "like a parrot." Parrots not only "attach man's ideas to man's words," but learn their meaning, and apply them properly, even in combinations, or, in another phrase, "they speak sense and talk to the purpose."

The chief proof upon which he relies for the establishment of this position is the performance of a parrot, belonging to a photographer, named Truefit, residing in Princes Street, Edinburgh, which was alluded to in *Chambers' Edinburgh Journal* for 1874. Dr. Lindsay visited this

bird in the following year to satisfy himself as to its attainments. The statement regarding them was to the effect that when the castle gun fires the bird rouses himself briskly from his doze, and calls out, "One o'clock, one o'clock; Polly wants his dinner, Jeanie; lay the cloth," and continues these demands until they are complied with and the dinner is served. He originates, interrupts, and takes part in general conversation, volunteers quiet, grave, and often intensely satirical observations, occasionally throwing in a little French and slang by way of coloring. He calls his master, but orders the servant, makes enquiries, utters exclamations, cajoles, scolds, and hurrahs, and then generally ends his display by congratulating himself on the brilliancy of his performance. There is, however, nothing in all this which is up to the mark of another parrot named in a recently printed page of Cassell's "Natural History." This bird was a competitor for a prize for linguistic attainments in a parrot show in the north of England, and after several other birds had exhibited their powers, and the cover was at length taken off his cage, he first took a rapid glance round at the company into which he had been so suddenly introduced, and then exclaimed, "By Jove! what a lot of parrots!" of course carrying off the prize by the acclamation of the judges.

Very many other human observers like Dr. Lindsay would, no doubt, have left this exhibition impressed with the marvellous ability of the parrot to make apt and shrewd comment upon the circumstances in which he was placed, without being struck by the nevertheless obvious fact that the aptness belonged to the master rather than the bird, and that the parrot was only rehearsing a part for which he had been carefully prepared with a view to the prize he was to win. That such, however, was the case, is sufficiently indicated by the words which he employed. The "By Jove!" and the "lot of parrots" are the language of a bird-fancier rather than of a bird. We ourselves have enjoyed the pleasure of an intimate acquaintance with a parrot for many years. This bird, which is a grey parrot of the well-known talking type, came from the Island of Ascension, captivated by kind looks and gentle words, fourteen years ago, and is still a resident in a suburban district of the great metropolis. Polly is notorious in her domesticated life for her shrewd remarks, and a better illustration could hardly be found

from which to argue that a parrot speaks sense and "talks to the purpose." Whenever she sees the can of water brought for her bath, she calls out, "Polly must be washed." When the cups and saucers are set out in the morning, she tells the maids that "Polly wants her breakfast," and, if not promptly attended to, tries a coaxing vein, and varies her appeal into "Give poor Polly her breakfast." She calls her mistress and master, the servants, and the dogs by their proper names, rarely making a mistake, and upon one occasion, when her mistress returned home after an unusual absence of a couple of months, surveyed her curiously and in silence for a few minutes, and then at last begged for a kiss, but touchingly substituted her mistress's name for her own in the request, seeming to imply that it was the mistress, who had been so long away, that was most in need of consolation and caress. She imitates her mistress's voice so exactly that the servants are frequently deceived and answer to her call. She sings and dances to her own accompaniment, and hurrahs heartily when her master comes home. She has strong likes and dislikes in regard to her habitual visitors, and shouts unceasingly at any one whom she disapproves, "Get out, you wretch!" The writer happily belongs to the former class, and whenever he appears it is Polly's delight to scuttle across the floor and climb to his shoulder, and then to begin a long course of osculatory endearment, turning her head up sideways now and then to see that she is not lavishing her kisses upon an insensible recipient. But Polly is not conversational with this well-known and long-tried friend. She reserves her words for other purposes, and concentrates her whole soul with him into personal caresses, and it is on this account that Polly is called upon to bear witness in this place. Polly's friend during these long years of close intimacy has earnestly cherished the hope that by steady and patient perseverance, and by unswerving faithfulness and sympathy, he might at last insinuate himself into Polly's mind as well as into her affections, and be rewarded for his devotion by some little appreciative word. But in this he has been signally disappointed. Polly at the present day is as unresponsively and as unintellectually dark and cold as she was on the first memorable occasion, years ago, when she began to give not uncertain tokens of her preference and love. She resolutely refuses to converse, and the conclusion

which her friend has been sorrowfully and regretfully compelled to accept as the result of close observation and study in this case certainly is very different from the one at which Dr. Lindsay has arrived. There is an exceedingly strong presumption against the rationality of the parrot's talk in the notable circumstance that it most delights to exercise its faculty of speech when it is alone. It is nearly always most disinclined to exhibit its gift when it is most desired that it should do so, but when it is left to itself will go on repeating the same set string of sounds for hours at a time, and over and over again. If it did possess its reputed conversational powers, it could scarcely be so hard to move to a response by a friendly appeal, and it would certainly not be so incapable of a retort under provocation. The talking of the parrot depends almost entirely upon the imitative faculty of the bird, and the exercise of a quite simple power of association under the influence of repetition and habit, which is mainly remarkable for the circumstance that one link in the chain is the production of vocal utterances. The parrot readily connects certain visual objects with specific vocal sounds, and reproduces the sounds whenever the visual suggestions for them appear. The astonishingly appropriate remarks are all easily explained in this way. When a parrot observes that the presence of different members of a household is connected with particular names, the association of the visual impression with the sound soon becomes so fixed as a mere piece of repetition and habit that the bird follows the example which is set before it, and calls out the right name when it sees the person. But there is no very high intellectual effort in that. It is a mere effect of habit and memory. It is not an instance of rational conversation in the sense that thought meets thought, and that word answers to word. The grey parrot which won the prize at the talking competition certainly did not know anything about Jove, or that his feathered companions constituted a lot. What he did know was that when the cover was taken off from his cage this was the sign that he was to repeat certain vocal sounds in a definite order, which he had been taught with some expenditure of trouble and time. The parrot very readily retains in its memory a limited number of a connected order of words, but it does not as easily learn long sentences. The longest phrases in the repertory of the grey parrot

which has been alluded to were, "What ship brought Polly home? The 'Briton,'" and "Are you cold? You look cold." The parrot which belonged to the Roman Catholic cardinal, and could repeat to him the whole of the Apostles' Creed, in all probability was worth the hundred gold pieces it is said to have cost, for its rarity, if for nothing else. There was, however, a jackdaw in the Crystal Palace in 1875, whose vocabulary comprised as many as one hundred and forty-one separate words. In considering the educational advantages which the parrot enjoys, it should not be overlooked that it has a long life for the exercise of its memory and the practice of its lessons. There appears to be no reasonable ground to doubt that the grey parrot sometimes attains the age of a hundred years. The French naturalist and traveller, Le Vailant, was acquainted with one which had certainly spent ninety-three years in domestic life.

The chief reason for the parrot's power of imitating the sounds of human speech is in reality a structural one. In common with other birds that utter vocal sounds, it has a supplementary voice-box, or larynx, at the bottom of its windpipe, where this air-tube branches for distribution to the right and left lung. There are true vocal cords at this place, and it is by the vibration of these cords that the vocal sounds are primarily produced. But, in addition to this vibrating organ, the parrot has also a thick, fleshy tongue, and a large, rounded beak of such mobile capacity that it actually serves as a third prehensile organ, or hand. The sound which is originated at the bottom of the trachea, or windpipe, by the vibration of the stretched membranes, is moulded into syllables and words, as it issues from the mouth, by the rapid and adroit movements of the tongue and beak, and tonal quality is conferred by the entire air-cavity that extends from the voice-cords to the horny outlet of the mouth. The strange feature in this arrangement is that the bird, which is endowed with so elaborately perfect an organ of vocal expression, and with so large a capacity of turning this to account, should nevertheless utter, in its wild state, only harsh and unmusical screams. It is not easy to conceive the use to which this exquisitely fashioned and highly finished instrument can be put in the forest wilderness in which the bird lives when not brought within the sphere of human influence.

Before proceeding to pronounce any final opinion upon the broad issue which has been raised by Dr. Lindsay in his argument for the high mental endowment of the lower animals, it is absolutely indispensable that attention be drawn to the fact that there is one clue through the tangled maze which he has opened to his readers that he does not appear to have availed himself of. This is found in the brain organization of the various grades of animated life that are the objects of scientific study.

The simplest form in which mental activity manifests itself in animals is the one which has been appropriately termed sensational consciousness — that is, the feeling of an impression stamped by some physical agency upon an organ of sense. But sensational consciousness has its seat in a distinct part of the organization which is built up for the very purpose of conferring this faculty. The experienced anatomist, who deals with the most subtle of the complexities of the material basis of animal life, can put his finger upon the very track of the nerve pulp which accomplishes this office, and by the influences which he brings to bear upon that track he can suspend or destroy, at will, the consciousness of the animal.

In insects the several parts of the living structure are kept so distinct, and so clear from the entanglements which occur in yet more highly organized creatures, that they constitute the best starting-point in the attempt to accomplish a firm grasp of this great physiological truth. In them the general plan of the design remains sketched in a bold outline which is very easy to trace. The familiar name of the class is, indeed, derived from this very peculiarity. The word "insect" implies that the body is cut into distinct sections, or segments, of which each one has a kind of separate vitality of its own. There is a distinct agglomeration of nerve pulp in each segment which is the seat of the nerve action of that part. The nervous apparatus, as a whole, consists of a series of such ganglia, grouped in pairs in each segment, and connected together by nerve threads running through the entire length of the series from end to end, and thus establishing a connection from the first pair to the last.

But the terminal pair of these nerve agglomerations is placed in the foremost segment, which answers the purpose of the insect's head, and is of a higher vital importance than the rest. Nerve threads connect it with the eyes and the antennæ,

which are organs of special sense for effecting a communication with the external world. These head ganglia, in fact, are the first rudimentary effort at the construction of a brain. They receive in themselves impulses derived from impressions made upon the eyes and antennæ, and then clothe those impulses with feeling. In other words, those head ganglia of the insect are its apparatus of sensational consciousness. The manifold impressions which are made upon the other nerve agglomerations in the long chain are unattended with consciousness, unless they are passed on to the head ganglia. They may produce energetic movements in the limbs of the insect, but entirely of an unsentient or unconscious character. If the body of a living centipede be cut transversely into several fragments, each one of those fragments continues to run about for some time upon the limbs that remain attached to them. But all the movements which are concerned in this working of the limbs are directed and controlled by the nerve agglomerations that are contained in the particular fragment. Each division has, so to speak, a cluster of nerve centres of its own. But those fragments, although they still retain nervous and muscular vitality, have no consciousness of the actions which they perform. There is no feeling in the case, any more than there would be feeling in the yet warm body of a decapitated man. Each fragment, although furnished with still living centres of nerve-action, has no organ of sensational consciousness among them, and is therefore devoid of conscious life.

In the case of an insect which has not been cut up into fragments, the head ganglia have been added at the extreme end of the chain of nerve agglomerations, in order that there may be the faculty of sensational consciousness in the creature, and in order that some of the movements of its body may be directed in accordance with the impressions which it receives through its organs of sense. This result is brought about by the instrumentality of the long nerve threads that run from ganglia to ganglia through the entire series of segments. In the circumstance of ordinary and not experimentally amputated life some of the movements of the body are set going and maintained by nerve impressions which do not reach beyond the ganglion centres close at hand. These are what are termed automatic or spontaneous movements. The animated frame is an automaton, or self-

moving piece of apparatus, so far as these are concerned. But other movements are originated and ruled by the special sense ganglia of the head. The impressions communicated from without are then conveyed to that tract of nerve structure, and are there converted into conscious sensation, and the conscious sensation determines the actions which are to ensue. The movements which result from the consciousness-clothed impulses are of a more systematized and more methodical kind than the automatic ones, because, as the sense ganglia are connected with all the other centres of nerve action, the movements of the distant parts can by their influence be co-ordinated and combined together for a definite effect.

These two quite distinct forms of nerve action, the automatic and the sense-dictated and conscious, have been happily characterized by likening the one to a message telegraphically transmitted through a direct route, and the other as a communication made in a roundabout way through a loop line. Wherever the loop line is employed in the animal organization, the communication is effected through the sense ganglia, or organs of sensational consciousness, and become clothed in it with the attribute of conscious feeling. The lesson which is thus taught in the nerve structure of insects is singularly enforced by the notable circumstance that, in the immature larva or caterpillar stage of insect existence, in which the vital activity of the structure is almost exclusively restricted to the mere work of feeding and growing, the sense ganglia placed in the head are still comparatively insignificant and small; whereas, when the caterpillar has put on its wings and entered upon its mature and perfected phase of existence, in which various other energetic operations are added to the business of feeding and growing, the sense ganglia placed in the head acquire very much larger and more important dimensions.

The nerve masses, which are placed in most animals in the head, and which are the seat of sensational consciousness, are termed the sensorial ganglia, which, translated into the language of technical physiology, become the sensorium. The sensorium in all animals is that part of the brain in which the sense ganglia are gathered together into a compacted or continuous mass. The sensorium, therefore, it will be understood, is the central organ of nerve structure, which is destined for the accomplishment of this

primary yet all-important function of mental life.

In animated creatures which are of a higher type of organization than the insect, the two distinct elements of the nerve structure which have been alluded to, the automatic and the conscious, are always present, and always to be traced. The automatic ganglia are still grouped in a lengthened-out and continuous chain, which in the vertebrated animals is lodged, for the purpose of safe keeping, in the internal cavity of the back-bone, and in that retreat is designated the spinal cord, whilst the sensorium, or sense-ganglia, is packed into the hollowed-out space of the interior of the skull. But in even the most lowly forms of the back-boned creatures there is a new element of nerve structure added to the sensory tract of the brain, which is not found in the insect. In the skull of the fish, for instance, a new pair of nerve ganglia appear, hung, as it were, upon the sensory agglomerations, of smaller size, but independent and distinct. These are the first rudiments of a part of the brain which performs functions of a yet higher and more complex class than mere conscious perception of the impressions of sense. They are the rudiments of the structure which is appropriated to the higher operations that in their full development and perfection are recognized as mind. With the gradual progress upwards in the scale of animated existence, these superadded ganglia of the brain become more prominent and more ample in their dimensions. In reptiles, such as the turtle, they exceed the sense ganglia in size. In birds they almost cover up those ganglia beneath their mass. In quadrupeds they predominate largely over the rest of the brain, and in man they swell out into the grand hemispherical masses which require the overarching dome of the majestic skull for their accommodation and lodgment, and which in the most intellectual men give a ponderous mass to the brain, exceeding four pounds and a half in weight.

It is a somewhat curious circumstance that this superadded mass of the brain, which is concerned in the higher intellectual and mental operations of life, has not been as happily and aptly distinguished by a name as the sensory ganglia have. It is familiarly spoken of as the hemispheres and the hemispherical ganglia of the brain. By the German physiologists it is termed the prosencephalon, or fore-brain.\* But there is nothing, it

\* The German physiologists divide the brain-mass

will be observed, in any of these names which indicates the function this portion of the brain performs, as immediately and forcibly as the word *sensorium* does for the tract it designates.

The hemispherical ganglia of the brain are distinguished by another peculiarity besides their vast relative size in all the more highly endowed animals, and especially in man. They are arranged in the form of irregular folds, which appear on the outer surface as sinuous convolutions. The nerve pulp of which they are composed is a broad layer of considerable extent, but this is gathered and puckered up in order to enable it to be packed away in the cavity of the skull, somewhat as a handkerchief is when it is crushed up in the hand. These convoluted folds of the brain increase in their number and complexity, in every case, with the intelligence and mental capacity of the animal. They are not present in the brains of fish, reptiles, and the greater number of birds. In the parrot, a single slight furrow appears as a first indication of a folding of the substance. In bats, rabbits, hares, hedgehogs, and moles, the convolutions are not more marked than they are in the parrot. In the carnivorous and ruminating quadrupeds they are very abundantly developed, with the folds running only in a longitudinal direction. In the elephant and the apes, and in man, they are still more abundant, and are directed transversely across the breadth of the brain, as well as along, and in some places the furrows between them are so deep as to separate each hemispherical mass into subordinate protuberances, or lobes. In the apes and in man there are three of these at each side of the brain.

The convoluted arrangement of the hemispherical ganglia of the brain, in these highly endowed animals, is connected with another very remarkable peculiarity of structure, which goes far to explain the object for which it is designed. The brain is nourished by blood which is supplied from a vast vascular network, or coat of vessels, thrown over the outside of the mass, and this vascular net dips in between the contiguous surfaces wherever there are folds. Under this plan, the supply of blood is very much more abundant and free than it could possibly

be if such extension of the vascular net into the interior of the brain substance had not been carried out. The more convoluted the brain, the more copious is its nourishment by blood; and the more copious its nourishment, of course the higher is its activity, and the more energetic are its operations.

The brain substance, which is folded into these convolutions in the higher animals, consists of an almost inconceivable number of very minute spherules of nerve pulp connected together by a most intricate maze of nerve threads, which traverse the substance in all directions, and which obviously serve the purpose of establishing a vital connection between the different groups of spherules. The subtle operations, which are secondarily performed upon the primary impressions of sense, are accomplished by the instrumentality of this most complicated apparatus. The conscious impressions originated in the sense ganglia are transmitted on to these penetralia of nervous life, and are there so dealt with as to be converted into ideas and memories, and to be made the material for the constructive operations of the mind. But the final and ultimate results of these mental operations, performed in connection with the convoluted ganglia, appear to be returned to the proper organ of conscious sensation. The sensory ganglia are as much concerned with the conscious perception of ideas as they are with the simple impressions of sense, and the conscious life of the higher animals is made up of a combination of both sense impressions from without, and of brain operations from within.

The psychological truth, which this comparative examination of the brain structure of the different classes of animals teaches, is that there is some faculty, over and beyond that of mere sensational consciousness, wherever there are the hemispherical ganglia in the brain, superadded to the sensory masses, which are placed in the head directly behind the eyes, and which, in the vertebrated animals, are planted above the nose and between the ears, the three most specialized organs of sense; and that this superadded power is narrow or wide in proportion as the hemispherical ganglia are small and compact, or large and expanded into voluminous convoluted folds. Wherever there are convoluted hemispheres to the brain, there are certainly memory, the formation of ideas out of the impressions of sense, the association of

into the fore-brain, mid-brain, and hind-brain (technically prosencephalon, mesencephalon, and metencephalon), and they have also two yet other supplementary divisions which are distinguished as the *twixt-brain* and *after-brain* (thalamencephalon and myelencephalon).

sensations and ideas into connected trains, consciousness of ideas, capacity for the exercise of volitional impulse and intentional movement, the perception of the conditions of an external world, and the power of acting in relation to that external world according to the knowledge of it that has been imbibed. If such operations of the brain hemispheres be accepted as indicating the existence of mind, then there is mind, to that extent, in the lower animals.

But the lesson has a deeper application than this. The hemispherical ganglia of the brain are enormously more complicated and relatively more vast in man than they are in any animals of lower grade. It is certain, therefore, that there is some brain capacity conferred by his organization upon man which the lower animals do not possess. To determine what this superadded capacity is, that is peculiar to man and that is not shared with him by the lower animals, is the great problem which has to be dealt with by comparative psychology.

Dr. Carpenter, who has very exhaustively and carefully examined this question from the physiologist's point of view, and who stands prominent amongst the authorities who accept the existence of reasoning processes and emotional states, analogous to those which are exercised and experienced by man, in such sagacious animals as the horse, the elephant, and the dog, concludes that the distinction between the mental capacity of the lower animals and man consists in the circumstance that those animals are destitute of the power of reflecting upon their own mental states, and that they are therefore incapable of performing any mental process in which there is abstraction, or generalization of ideas. The operations of mind, even in man, are in part spontaneous and automatic, and in part determined and directed by an effort of will. The superiority of man in mental capacity is due to the preponderance of the volitional faculties of the mind over its mere automatic activities, and to the discipline and growth which this favors and secures. In the lower animals, it is the spontaneous and automatic activities of the mind which are supreme. Here and there, as in the case of the elephant and the dog, there appear to be actions performed which indicate that these animals share to some limited extent in the higher mental powers that are preponderant in man. But, in most of these instances, a more rigid investigation of the facts makes it obvious

that the results which have been observed are associated acts that can be primarily traced to the brains of men, rather than to any independent activity in the animals themselves. Wherever domesticated animals, which have been trained and educated by man, are concerned, a very large amount of caution is required to guard against the influence of this most fertile source of fallacy, as is abundantly proved by the eager and ready credence that is given in all directions to the current tales of the intellectual performance and rational conversation of birds as low in the scale of brain organization as parrots.

There is one peculiarity in the structural arrangements of the human brain which strongly favors this view of the question. As the hemispherical ganglia of the brain become more largely developed in the ascending scale of the animal organization, white nerve threads appear, connecting the several parts with each other, and assuming at last the form of fibrous cords passing in various directions. These white cords are then termed the commissures of the brain. In the human brain such commissures are of exceedingly large dimensions. This is exactly what should be, if the distinctive character of the human mind, which is ministered to by the brain, is the faculty of constructing complicated and abstract ideas out of simpler perceptions and states. It is recognized by all physiologists that these commissural bands, so largely developed in the brain of man, are the material means by which the simpler conceptions of the mind are associated, sorted, and classed, and by which the more complicated perceptions are arrived at. The metaphysicians, who deduce all their conclusions from the observed operations of the mind, for the most part hold that the lower animals possess a kind of understanding built up directly from the impressions of sense, but that they have no capacity for abstracting ideas, and no originating or creative power; and that man has a higher and superadded attribute of mind, which can both abstract ideas and originate mental processes, and that these higher capabilities constitute the reason which is given to man and denied to the rest of the animal creation. But this reason of the metaphysician is just those higher capacities of abstraction, comparison, and judgment, which are physiologically provided for by the more ample convolutions and more abundant commissural connections of the human brain; and the metaphysi-

cian therefore appears to have arrived at pretty much the same result as the physiologist, although he has travelled along an entirely different path. In all probability the lower animals can and do deal with their sensory impressions and with their sensational consciousness by that higher faculty which is termed the understanding by Kant, and which serves the purpose of so linking together these primary impressions of conscious sense as to convert them into intelligible thought, but are altogether destitute of the yet higher power, so energetic and supreme in man, which then deals with these products of the understanding, and, as a free and independent activity, *reasons* upon them, moulding them to a purpose, and voluntarily directing the associated currents in which they flow. It is of this higher and exclusively human power that Victor Cousin speaks, in his lectures on the philosophy of Kant, as "the free and voluntary activity which assumes the government of the faculties, and which constitutes at once the personality and the consciousness."\* The mental operations of the lower animals, in the absence of this directing activity, approach more to the character of waking dreams than of reasoning thought. They run along in their sense-suggested and unvarying trains without any higher control than that which is affected by the interpolation of fresh sensorial impressions; and they are only guided by man when he supplies these interpolated interruptions. They are more vivid and more coherent than human dreams, only because, in consequence of their being *waking* dreams, they have mingled in with them so large a proportion of fresh sensual impressions. Concurrent sensations, intermixed with the memories and automatically-driven notions, give a vividness and vigor to the images which the idea-woven dreams of sleeping men do not possess. But they are still essentially dreams, suggested by sense impressions instead of by memories. This, no doubt, is a mode of considering the mental faculties of the lower

animals which Dr. Lindsay would not accept. It nevertheless has, to say the least, quite as strong a claim to the acceptance of unbiased enquirers as the alternative notion, so strongly advocated by him, that large bodies of men never attain to the mental and moral development of dogs.

Dr. Lindsay, in one passage of his book, urges that we know nothing yet of the final potentialities in mental capacity of the lower animals, and that we can hardly be said to do so until the same patient efforts that are lavished upon the negroes have been made by missionaries for the improvement of their anthropoid poor relations, and that, when this has been done, such results may be attained as will suffice to put an end once and for all to current sneers as to the psychological connection between men and monkeys. If, however, this grand result of missionary enterprise were to be achieved, and to bring out the anticipated consequence, the disciples of Mr. Darwin would assuredly step in and say that the monkeys had been developed into men by the evolution, and therefore superaddition, of the rational faculties.

Notwithstanding the exaggerated strain which Dr. Lindsay throws upon the main line of his argument for the equality and fraternity of the lower animals with man, he gets back at last into the domain, which has been happily designated that of organized common sense, when he sums up the attributes in which man is superior to the animals, as he does in the following words :—

Civilized man possesses the following elements of superiority over other animals :—

1. The power of speech.
2. The use of hands.
3. Knowledge of the arts of—
  - (a) Writing.
  - (b) Printing.
  - (c) Metallurgy.
  - (d) Glassmaking.
  - (e) Cooking.

#### 4. The production and applications of fire.

It is extremely difficult for man to realize the magnitude or importance of these advantages in the development of his moral and mental nature, and to make due allowance for the disadvantage under which other animals labor in the non-possession of these accomplishments.

In this we most entirely and unconditionally agree. The task is so difficult, indeed, that Dr. Lindsay has utterly failed to accomplish it, or he would at once have perceived that the things which he thus enumerates are exactly the circumstances

\* Kant held that human knowledge is derived from two quite distinct sources, intuitions immediately derived from the sensations, and notions which are formed by the understanding out of the intuitions derived from sense. The notions matured by the understanding are subsequently combined and organized into more complex and more abstract results by a third faculty defined as the reason. Victor Cousin adds to this third and highest faculty of the human mind an attribute of free and voluntary activity, which he thinks the conception of Kant did not include. It is almost certainly this power of free and voluntary activity of the mind which is deficient in the lower animals.

which warrant the induction that the lower animals are inferior to man; and instead of confining to five or six heads the arts in which man excels, he might have extended them to every art of civilized life.

Whilst glancing at what he terms "unsolved problems in the psychology of the lower animals," Dr. Lindsay gives careful attention to the curious circumstance that many of the lower animals find their way with readiness and precision where man is hopelessly at fault, and he inclines to attribute this power to the presence of a sixth supplementary sense, which confers upon them an intuitive knowledge of the points of the compass, or something of the kind. In many instances this power of self-guidance manifestly depends on keen observation and retentive memory. It is so with the horse in travelling through strange country. Attention to landmarks, memory, and attachment to home often enable it to strike out a correct path through the wilderness, and especially in the dusk twilight hour, when its rider is entirely without any serviceable clue. The dog will do even more astonishing things. Dr. Lindsay reproduces the narrative of the Scotch collie which shipped himself home, entirely amongst strangers, from Calcutta to Inverkeithing, in Fifeshire, on board a ship bound for Dundee. He first went to Dundee, and then changed his ship there for another just starting for Inverkeithing. It is here quite manifest that the dog must have been unconsciously rather than rationally led. There was some familiar sight, sound, or smell on board the Dundee ship which attracted his regard and induced him to establish himself on board, and in the same way when he reached Dundee he found something there which was redolent and suggestive of Fife. The case of the crossing of wide tracts of sea, and often for considerable distances during night, by migratory birds, is a more difficult one to understand; but it is probable that they are guided in their flight by some extension of the acuteness of their ordinary senses rather than by the operation of a distinct one not yet known to man. It is a well-settled fact that the sight, the hearing, and the smell are very much more acute in some animals than they are in man. The keenness of both sight and smell in the vulture, the sharpness of hearing in the horse and in rabbits and hares, and the acuteness of smell in sporting dogs are well known to every one. There

certainly are sonorous vibrations distinguished by insects which are quite imperceptible to man. It is very probable, therefore, that migratory birds are guided in their nocturnal passage over the sea by perceptions of an ordinary sensual class, operating upon organs of exceptionally delicate capacity and structure.

Amongst the numerous circumstances which Dr. Lindsay adduces in support of his notion of the mental equality of the lower animals with man, he places the influence of alcohol. He says that, although in some rare instances the lower animals have the force of will, or the good sense, to stop in time in their tippling, there is always the danger that the liking for strong drink may become a craving, and that the craving may grow into an insatiable and irresistible impulse, and at last amount to actual dipsomania and incurable disease. A cock alluded to by Dr. Magnan, of Paris, that had acquired a fondness for absinthe, used to drink of it until he fell, as if lifeless, and lay motionless upon the ground, and then after a short time would try to get up, but fail and fall back beating the air with his wings, and scraping up the soil. Nevertheless, as soon as he was able, he returned to his tippling, as Dr. Lindsay remarks, "just as though he were as stupid as a man." In the year 1864 the people of Dublin used to flock in crowds to the Zoological Gardens to see a Natal lion take its whiskey-punch, which the noble beast did on the Sunday before its death, "just as if it had been a Christian." The parrot, notwithstanding the astuteness of its ordinary conversation, becomes garrulous upon wine. Rats broach beer, wine, and spirit casks without any encouragement or teaching from man, and get dead drunk whenever they have the opportunity. A cat of weak brain became so inordinately fond of porter that in the end she forswore milk for the more seductive beverage. The horse becomes vicious and unmanageable when inebriated. It appears that, upon the whole, champagne is the favorite tipple among the lower animals. But the crowning instance of the equality of the lower animals with man in the intellectual privilege of drunkenness is that of a jelly-fish which rolled about in the water when it was tipsy, "just like the staggering of a drunken man," and then sank into a state of torpid insensibility from which nothing could arouse it. These instances, and very many others of a similar nature, appear inferentially to have been brought

together to support the argument that the lower animals are mentally like man. It is nevertheless not possible to doubt that Dr. Lindsay, as a "physician naturalist," is quite aware that alcohol in reality exerts its peculiar physical influence upon all parts of the nervous structures, the lowest as well as the highest. When men become *insensible* from strong drink, it is clearly the seat of sensational consciousness, or the sensorium, which is paralyzed by the narcotic agent; and this is that part of the brain structure which is most certainly shared with man by at least all the lower vertebrates.

Dr. Lindsay conceives that the mental equality of the lower animals with man entitles them to share in many of the social advantages which in a state of advanced civilization he provides for his own kind. He thinks that, if it is incumbent upon him to maintain aged people in their declining years, the same thing should assuredly be done for animals whose only fault is the decrepitude of age; that there should be well-appointed asylums for the old, and that testamentary dispositions in favor of animals should cease to be regarded as evidence of incapacity or insanity in the testator, as in the case of the Viennese lady, contested in a law court in 1874, in which the testator had left her whole fortune to twelve pet cats, their legitimate offspring, and the custodians of these feline legatees, existent and to come. There should be arrangements for boarding out animals during the holiday excursions of the human members of the family. There should be hospitals for special diseases, and above all things for the insane. There should be establishments of this class for the horse, the dog, the cat, and the ox—for song birds and for poultry. There should be sanatoria for convalescents, a sanitary organization and inspection in zoological gardens and menageries, maternity charities for the solace of four-footed mothers, and of course reformatories as well as prisons for culprits. The only scruple which appears to have limited the benevolent aspirations of Dr. Lindsay in this direction seems to have been the possible doubt whether it was right to maintain bugs, fleas, and lice in vermin wards, and to give them periodical supplies of male and female human mendicants as food. It may be presumed, under all the circumstances, that it is not really a slip of the pen, as it seems to be at the first glance, when he speaks of the

foundation, endowment, and support of institutions of this class as being dictated by the spirit of *philanthropy*.

These utopian and fanciful schemes contain, however, some really practical suggestions, mingled with their fervid enthusiasm, which are worthy of kindly and respectful consideration at the hands of thoughtful and benevolent men. Water-troughs might assuredly be provided in towns for smaller domesticated animals, as well as for horses and oxen, and much might be taught in schools regarding the habits of the lower animals that would go far towards revolutionizing the hard-handed and unsympathetic way in which they are too commonly treated by those who have them in charge. Dr. Lindsay recommends that there should be special lesson books for schools illustrating the habits and natural history of animals, and that formal instruction on the same subjects should be provided for the occupants of pulpits as well as for the attendants at schools, so that there may be more frequent allusions to such topics in sermons than are now met with. He suggests that prizes might be given in schools for intelligent observation of the habits of animals, and that pictorial representations of the best types of animal character should be exhibited at places of public resort, and particularly at railway stations. From this last allusion it would almost seem that he must have had in his mind the noble and touching dog portrait that makes its mute appeal against vivisection at most of the metropolitan railway stations, and that most probably has secured more converts than very many of the exaggerated and indiscriminate denunciations that have been uttered elsewhere. In one of the sections devoted to the treatment of the lower animals the following eloquent passage occurs:—

It is perhaps too much to expect any radical change in opinion and practice in the present generation regarding the treatment that animals have a right to expect at man's hands. Our hopes naturally centre in the rising generation, in the proper education of the young of both sexes, in the principle and practice of humanity to animals, in the application of the grand old golden rule of Scripture to all living sentient creatures. What our children have to learn, what they should be carefully taught, is that other animals, or at least those with whom we have most to do, think and feel as we do; are affected by the same influences, moral or physical; succumb to the same diseases, mental or bodily; are elevated or de-

graded in the social scale according to our treatment; may become virtuous and useful, or vicious and dangerous, just as we are appreciative, sympathetic, kindly disposed towards them.

This is so true that, although we do not yet share with M. Houzeau his sanguine anticipation that monkeys may some day be taught to speak, we do participate with Frederika Bremer in the rational belief that nobler races of animals may be yet produced by better and more kindly treatment on the part of man.

In the training of animals the great secret of success is that their education shall be commenced at a very early age, and that it shall be conducted with the utmost patience and gentleness. In reference to the itinerant exhibitions known as happy families Dr. Lindsay remarks:—

It is astonishing what man can achieve in the training of animals by the practical application of such qualities as patience, perseverance, sympathy, kindness, mercy, if only the animals be taken in hand at a very early stage of their growth.

It is equally certain that injudicious and cruel treatment exercises a very pernicious and degrading influence upon the character of animals, and that man is on this account responsible for much of the vicious behavior that is met with amongst them.

When a master is angry; when he is absurdly or cruelly severe in the form or degree of punishment administered; when punishment is inflicted on an innocent animal; when the punisher is a person whom the punished animal hates; when the animal is naturally irritable, or has been rendered unnaturally so by continuous ill usage; and, finally, when punishment is improperly administered to animals laboring under various kinds of disease, mental or bodily, it is but natural that viciousness in the man should beget viciousness in the animal; that the latter should acquire a dislike, perhaps permanent, both to its work and its master; that its character should be vitiated by the development of rancor, resentment, moroseness.

The inherited character of animals, which has been first moulded by external circumstance, and then transmitted from parent to offspring, has of course something to do with the facility with which particular results in training can be secured. As Dr. Lindsay remarks, the first proceeding in the training of animals "destined for any of the learned professions" is to make trial of the capacity and

disposition, and to select such individuals as appear to be most docile and submissive. Monkeys are very successfully chosen as performers at exhibitions simply by testing the readiness with which they give their attention to any unusual proceedings carried out in their presence. A monkey which is so fitful and discursive that its attention cannot be fixed is of no use whatever to trainers.

Dr. Lindsay considers that domesticated and captive animals, when kindly dealt with by man, lose their desire for freedom because they are sensible of the advantages which they derive from their dependent state. A careful study of the lives of the carriage horses of London, however, certainly tends to a very different interpretation of the matter. If these animals have warm stables, a plentiful supply of hay and corn, and gentle and kindly handling by their attendants, they certainly become reconciled to their captivity, drag their carriages unresistingly through the crowded and stone-paved thoroughfares during the appointed hours, and restrain the inherent impetuosity of their active limbs within the legitimate bounds of prancing and high action. But nothing can well be further from the truth than that these horses voluntarily and knowingly barter the free life of the pasture for the drudgery of the streets and the imprisonment of the stables, or that they acquiesce in their fate because they are conscious of the advantages of shelter and corn. The life of the domesticated horse is perhaps on the whole the most telling proof that could be adduced of the absence of high faculties of mind in this class. It indicates in the most striking way that in the lower animals the so-called mental faculties are altogether comprised within the domain of habit and automatic action. The well-broken horse dreams through its uneventful life, obedient to the suggestions of its senses, and to the chains of association that are imposed upon it by man. The secret of its docility is the readiness with which it acquires and repeats the habits that are established for it by man, and its inability to originate purposes of its own. Every action in its useful life may be traced to the influence of the human and not of the equine brain, until it begins to kick, and then almost always its kicking can be also ascribed to some accidental derangement in the links of its automatic chain. It will assuredly be an ill day for the cab and carriage service of London when the horses begin to

## ADAM AND EVE.

BY THE AUTHOR OF "DOROTHY FOX."

## CHAPTER XXX.

FOR an instant every one seemed paralyzed and transfixed in the position into which upon Jonathan's entrance they had started. Then a sudden rush was made toward the door, which several of the strongest blocked up, while Adam called vainly on them to stand aside and give the chance of more air. Joan flew for water, and Jerrem dashed it over Jonathan.

There was a minute of anxious watching, and then slowly over Jonathan's pallid face the signs of returning animation began to creep.

"Now, stand back—stand back from him, do!" said Adam, fearing the effect of so many faces crowding near would only serve to further daze his scared senses. "What is it, Jonathan? what is it, lad?" he asked, kneeling down by him.

Jonathan tried to rise, and Adam motioned for Barnabas Tadd to come and assist in getting him on his feet.

"Now, sit down there," said Adam, "and put your lips to this, and then tell us what's up."

Jonathan cowered down as he threw a hasty glance round, the meaning of which was answered by a general "You knows all o' us, Jonathan, don't ee?"

"Iss," said Jonathan, breaking into a feeble laugh, "but somehow I'd a rinned till I'd got 'em all, as I fancied, to my heels, close by."

"And where are they, then?" said Adam, seizing the opportunity of getting at the most important fact.

"Comin' long t' roadway, man by man, and straddled on to their horses' backs. They'm to take 'ee all, dead or livin', sarch by night or day. Some o' 'em is come all the ways fra Plymouth, wavin' and swearin' they'll have blid for blid, and that if they can't pitch 'pon he who fired to kill their man every sawl aboard the 'Lottery' shall swing gallows-high for un."

A volley of oaths ran through the room, Joan threw up her arms in despair, Eve groaned aloud.

Suddenly there was a movement as if some one was breaking from a detaining hand. 'Twas Jerrem, who, pushing forward, cried out, "Then I'll give myself up to wance: nobody sha'n't suffer 'cos o' me. I did it, and I wasn't afear'd to do

reason upon the advantages which they possess. An entirely similar remark must be made in reference to the proceedings of trained elephants, when they so cleverly give their assistance to capture their wild brethren of the forest. These are continually adduced as marvellous proofs of the mental capacity of these animals. But their testimony rather is to passive docility and proneness to act upon automatic suggestion, than to any power of independent thought. The elephant has a wider range and a greater versatility of associated perceptions and impulses than the horse, but it is very nearly as much under the influence of automatic habit, and can be played upon by its human manipulator with nearly the same precision and certainty of result. Dr. Lindsay in one place refers to the dread which the ox sometimes exhibits for the shambles. As a general rule, the ox seems to be marvellously unconscious of the fate which awaits him when he is unresistingly led into the slaughter-house, and in his death testifies very forcibly to the same truth of the unreasoning and automatic character of the mental operations of the animal. The dog, of all the lower animals, seems to approach the most nearly to the confines of debatable ground in the initiation of apparently independent acts. But very much of the effect which he produces in this particular may in reality be referred to the still larger range and to the still greater versatility of his trains of self-derived impressions, and to his position, in his unbroken life of domestication, as the dependent and intimate friend of man, and must be taken to indicate impressibility and retentiveness rather than true originating power. The entire subject of the mental life of the lower animals is one that is full of interest for thoughtful men, and this is a charm which is not at all diminished by the fact that there are still mysterious depths in it that have not yet been fathomed either by physical or metaphysical methods of research. Dr. Lindsay's book is a valuable contribution to this branch of scientific enquiry on account of the vast mass of information which it brings within easy and manageable reach for independent examination and review. But it is not too much to say that the author has not succeeded in the establishment of his dogma of the mental equality of the lower animals with man. His stories are amusing, but his arguments are futile, and his conclusions preposterous.

it, neither, and no more I ain't afeared to answer for it now."

The buzz which negatived this offer bespoke the appreciation of Jerrem's magnanimity.

Adam alone had taken no part in it: turning, he said sternly, "Do we risk our lives together, then, to skulk off when danger offers and leave one to suffer for all? Let's have no more of such idle talk. While things promised to run smooth you was welcome to the boast of havin' fired first shot, but now every man aboard fired it; and let he who says he didn't stand out and say it now."

"Fair spoke and good sense," said the men.

"Then off with you, each to the place he thinks safest. Jerrem and you, father, must stay here. I shall go to the mill, and, Jonathan, for the night you'd best come along with me."

With little visible excitement and but few words the men began to depart, all of them more or less stupefied by the influence of drink, which, combined with this unexpected dash to their hopes and overthrow of their boastings, seemed to rob them of all their energy. They were ready to do whatever they were asked, go wherever they were told, listen to all that was said, but anything beyond this was then impossible. They had no more power of deciding, proposing, arranging for themselves, than if they had been a flock of sheep warned that a ravenous wolf was near.

The one necessary action which seemed to have laid hold upon them was that they must all solemnly shake hands; and this in many cases they did over and over again, repeating each time, with a warning nod of the head, "Well, mate, 'tis a bad job o' it, this," until some of the more collected felt it necessary to interfere and urge their immediate departure: then one by one they stole away, leaving the house in possession of its usual occupants.

Adam had already been up-stairs to get Uncle Zebedee—now utterly incapable of any thought for himself—safely placed in a secret closet which was hollowed in the wall behind the bed. Turning to Jerrem as he came down, he said, "You can manage to stow yourself away; only mind, do it at once, so that the house is got quiet before they're time to get here."

"All right," said Jerrem doggedly, while Joan slid back the seat of the settle, turned down a flap in the wall, and discovered the hole in which Jerrem was to lie concealed. "There! there ain't an-

other hidin'-place like that in all Polperro," she said. "They may send a whole regiment o' sodgers afore a man among 'em 'ull pitch on 'ee there, Jerrem."

"And that's the reason why I don't want to have it," said Jerrem. "I don't see why I'm to have the pick and choice, and why Adam's to go off to where they've only got to search and find."

"Well, but 'tis as he says," urged Joan. "They may ha' got you in their eye already. Come, 'tis all settled now," she continued persuasively; "so get 'longs in with 'ee, like a dear."

Jerrem gave a look round. Eve was busy clearing the table, Adam was putting some tobacco into his pouch. He hesitated, then he made a step forward, then he drew back again, until at last, with visible effort, he said, "Come, give us yer hand, Adam." With no affectation of cordiality Adam held out his hand. "Whatever comes, you've spoke up fair for me, and acted better than most would ha' done, seein' that I've let my tongue run a bit too fast 'bout you o' late."

"Oh, don't think I've done any more for you than I should ha' done for either one o' the others," said Adam, not willing to accept a feather's weight of Jerrem's gratitude. "However," he added, trying to force himself into a greater show of graciousness, "here's wishin' all may go well with you, as with all of us!"

Not over-pleased with this cold reception of his advances, Jerrem turned hastily round to Joan. "Here, let's have a kiss, Joan," he said.

"Iss, twenty, my dear, so long as you'll only be quick 'bout it."

"Eve!"

"There! nonsense now!" exclaimed Joan, warned by an expression in Adam's face: "there's no call for no leave-takin' with Eve: her 'll be here so well as you."

The words, well-intentioned as they were, served as fuel to Adam's jealous fire, and for a moment he felt that it was impossible to go away and leave Jerrem behind; but the next instant the very knowledge of that passing weakness was only urging him to greater self-command, although the effort it cost him gave a hardness to his voice and a coldness to his manner. One tender word, and his resolve would be gone—one soft emotion, and to go would be impossible.

Eve, on her part, with all her love reawakened, her fears excited, and her imagination sharpened, was wrought up to a pitch of emotion which each moment grew more and more beyond her control.

In her efforts to keep calm, she busied herself in clearing the table and moving to and fro the chairs, all the time keenly alive to the fact that Joan was hovering about Adam, suggesting comforts, supplying resources and pouring out a torrent of wordy hopes and fears. Surely Adam would ask — Joan would think to give them — one moment to themselves? If not she would demand it, but before she could speak, boom on her heart came Adam's "Good-bye, Joan, good-bye." What can she do now? How bear this terrible parting? In her efforts to control the desire to give vent to her agony, her powers of endurance utterly gave way. A rushing sound as of many waters came gurgling in her ears, dulling the voice of some one who spoke from far off.

What are they saying? In vain she tried to catch the words, to speak, to move: then, gathering up all her strength, with a piercing cry she tried to break the spell. The room reeled, the ground beneath her gave way, a hundred voices shrieked good-bye, and with their clamor ringing in her ears Eve's spirit went down into silence and darkness. Another minute, and she was again alive to all her misery: Joan was kneeling beside her, the tears streaming from her eyes.

"What is it? Where's Adam?" exclaimed Eve, starting up.

"Gone," said Joan: "he said 'twas better to, 'fore you comded to yourself agen."

"Gone! and never said a word?" she cried. "Gone! Oh, Joan, how could he? how could he?"

"What would 'ee have un do, then?" said Joan sharply. "Bide dallyin' here to be took by the hounds o' sodgers that's marchin' pon us all! That's fine love, I will say!" But suddenly a noise outside made them both start and stand listening with beating hearts until all again was still and quiet: then Joan's quick-roused anger failed her, and, repenting her sharp speech, she threw her arms round Eve's neck, crying, "Awh, Eve, don't 'ee lets you and me set 'bout quarrellin', my dear, for if sorrow ain't a-drawin' nigh my name's not Joan Hocken. I never before felt the same way as I do to-night. My spirits is gived way: my heart seems to have falled flat down and died within me, and, be doing what I may, there keeps soundin' in my ears a nickety-knock like the tappin' on a coffin-lid."

#### CHAPTER XXXI.

SINCE the night on which Jonathan's arrival had plunged the party assembled at Zebedee Pascal's into such dismay a week had passed by — seven days and nights of terror and confusion.

The determined manner in which the government authorities traced out each clew and tracked every scent struck terror into the stoutest hearts, and men who had never before shrunk from danger in any open form now feared to show their faces, dared not sleep in their own houses, nor, except by stealth, visit their own families. At dead of night, as well as in the blaze of day, stealthy descents would be made upon the place, the houses surrounded, and strict search made. One hour the streets would be deserted, the next every corner bristled with rude soldiery, flinging insults and imprecations on the feeble old men and defenceless women, who, panic-stricken, stood about vainly endeavoring to seem at their ease and keep up a show of indifference.

One of the first acts had been to seize the "Lottery," and orders had been issued to arrest all or any of her crew, wherever they might be found; but as yet no trace of them had been discovered. Jerrem and Uncle Zebedee still lay concealed within the house, and Adam at the mill, crouched beneath corn-bins, lay covered by sacks and grain, while the tramp of the soldiers sounded in his ears or the ring of their voices set his stout heart quaking with fear of discovery. To men whose lives had been spent out of doors, with the free air of heaven and the fresh salt breeze of the sea constantly sweeping over them, toil and hardship were pastimes compared to this inactivity; and it was little to be wondered at that for one and all the single solace left seemed drink. Drink deadened their restlessness, benumbed their energies, made them forget their dangers, sleep through their durance. So that even Adam could not always hold out against a solace which helped to shorten the frightful monotony of those weary days, dragged out for the most time in solitude and darkness. With no occupation, no resources, no companion, ever dwelling on self and viewing each action, past and present, by the light of an exaggerated (often a distorted) vision, Adam grew irritable, morose, suspicious.

Why hadn't Joan come? Surely there couldn't be anything to keep Eve away? And if so, might they not send a letter, a

message or some token to show him that he was still in their thoughts? In vain did Mrs. Tucker urge the necessity of a caution hitherto unknown: in vain did she repeat the stories brought of footsteps dogged, and houses watched so that their inmates dared not run the smallest risk for fear of its leading to detection. Adam turned a deaf ear to all she said, sinking at last down to the conclusion that he could endure such suspense no longer, and, come what might, must the next day steal back home and satisfy himself how things were going on. The only concession to her better judgment which Mrs. Tucker could gain was his promise to wait until she had been in to Polperro to reconnoitre; for though, from having seen a party of soldiers pass that morning, they knew some of the troop had left, it was impossible to say how many remained behind nor whether they had received fresh strength from the opposite direction.

"I sha'n't give no more o' them than I sees the wisdom of," reflected Mrs. Tucker as, primed with questions to ask Joan, and messages to give to Eve, she securely fastened the doors preparatory to her departure. "If I was to tell up such talk to Eve, her'd be piping off here next minit or else sendin' back a pack o' silly speeches that 'ud make Adam mazed to go to she. 'Tis wonderful how took up he is with a maid he knows so little of. But there! 'tis the same with all the men, I b'lieve — tickle their eye and good-bye to their judgment." And giving the outer gate a shake to assure herself that it could not be opened without a preparatory warning to those within, Mrs. Tucker turned away and out into the road.

A natural tendency to be engrossed by personal interests, together with a life of narrowed circumstances, had somewhat blunted the acuteness of Mrs. Tucker's impressionable sensibilities, yet she could not but be struck at the change these last two weeks had wrought in the aspect of the place. The houses, wont to stand open so that friendly greetings might be exchanged, were now closed and shut; the blinds of most of the windows were drawn down; the streets, usually thronged with idlers, were all but deserted; the few shops empty of wares and of customers. Calling to her recollection the frequent prophetic warnings she had indulged in about these evil days to come, Mrs. Tucker's heart smote her. Surely Providence had never taken her at her word and really brought a judgment on the

place? If so, seeing her own kith and kin would be amongst the most to suffer, it had read a very wrong meaning in her words; for it stood to reason when folks talked serious-like they didn't always stop to measure what they said, and if a text or two o' Scripture sounded seemly, 'twas fitted in to help their speech out with, not to be pulled abroad to seek the downright meanin' o' each word.

Subdued and oppressed by these and like reflections, Mrs. Tucker reached Uncle Zebedee's house, inside which the change wrought was in keeping with the external sadness. Both girls looked harassed and careworn — Joan, now that there was no further occasion for that display of spirit and bravado which before the soldiers she had successfully contrived to maintain, utterly broken down and apathetically dejected; Eve, unable to enter into all the difficulties or sympathize in the universal danger, ill at ease with herself and irritable with all around her. In her anxiety to hear about Adam — what message he had sent and whether she could not go to see him — she had barely patience to listen to Mrs. Tucker's roundabout details and lugubrious lamentations, and, choosing a very inopportune moment, she broke out with, "What message has Adam sent, Mrs. Tucker? He's sent a message to me, I'm sure: I know he must have."

"Awh, well, if you knows, you don't want to be told, then," snorted Mrs. Tucker, ill pleased at having her demands upon sympathy put to such sudden flight. "Though don't you think, Eve, that Adam hasn't got somethin' else to think of than sendin' love-messages and nonsense o' that sort. He's a good deal too much took up 'bout the trouble we're all in for that. He hoped you was all well, and keepin' yer spirits up, Joan."

"Poor sawl!" sighed Joan: "I 'spect he finds that's more than he can do."

"Ah, you may well say that," replied Mrs. Tucker, casting a troubled look toward her daughter's altered face. "Adam's doin' purty much the same as you be, Joan — frettin' his insides out."

"He's fretting, then?" gasped Eve, managing to get the words past the great lump which seemed to choke her further utterance.

"Frettin'," repeated Mrs. Tucker with severity. "But there! why should I?" she added, as if blaming her sense of injury. "I keeps forgettin' that, compared with Joan, Eve, you'm nothin' but a stranger, as you may say; and, though I

dare say I sha'n't get your thanks for saying it, still Adam could tell 'ee so well as me that fresh faces is all very well in fair weather, but in times of trouble they counts for very little aside o' they who's bin brought up from the same cradle, you may say."

Eve's swelling heart could bear no more. This sense of being set aside and looked on as a stranger was a gall which of late she had been frequently called upon to endure, but to have it hinted at that Adam could share in this feeling toward her—oh, it was too much, and rising hastily she turned to run up-stairs.

"Now, there's no call to fly off in no tantrums, Eve," said Mrs. Tucker; "so just sit down now and listen to what else I've got to say."

But Eve's outraged love could hide itself no longer: to answer Joan's mother with anything like temper was impossible, and, knowing this, her only refuge was in flight. "I don't want to hear any more you may have to say, Mrs. Tucker;" and though Eve managed to keep under the sharpness of her voice, she could not control the indignant expression of her face, which Mrs. Tucker fully appreciating, she speeded her departure by the inspiriting prediction that if Eve didn't sup sorrow by the spoonful before her hair was gray her name wasn't Ann Tucker.

"Awh, don't 'ee say that," said Joan. "You're over-crabbit with her, mother, and her only wantin' to hear some word that Adam had sent to her own self."

"But, mercy 'pon us! her must give me time to fetch my breath," exclaimed Mrs. Tucker indignantly, "and I foaced to fly off as I did for fear that Adam should forestall me and go doin' somethin' foolish!"

"He ain't wantin' to come home?" said Joan hurriedly.

"Iss, but he is, though. And when us see they sodgers go past I thought no other than he'd a set off them and there. As I said to un, 'Tis true you knows o' they that's gone, but how can 'ee tell how many's left behind?'"

Joan shook her head. "They'm all off," she said: "every man of 'em's gone; but, for all that, Adam mustn't come anighst us or show his face in the place. 'Tis held everywhere that this move is nothin' but a decoy to get the men out o' hidin', and that done, back they'll all come and drop down on 'em."

"Well, then, I'd best go back to wanst," cried Mrs. Tucker, starting up, "and try

and put a stop to his comin', tho' whether he'll pay any heed to what I say is more than I'll answer for."

"Tell un," said Joan, "that for all our sakes he mustn't come, and say that I've had word that Jonathan's lurkin' nigh about here some place, so I reckon there's somethin' up; and what it is he shall know as soon as I can send word to un. Say that ought to tell un 'tisn't safe to stir, 'cos he knows that Jonathan would sooner have gone to he than to either wan here."

"Well, I'll tell un all you tells me to," said Mrs. Tucker with a somewhat hopeless expression; "but you know what Adam is, Joan, when he fixes his mind on anythin'; and I've had the works o' the world to keep un from comin' already: he takes such fancies about 'ee all as you never did. I declare if I didn't know that p'raps he's a had more liquor than he's used to take o' times I should ha' fancied un light-headed like."

"And so he'll be if you gives much sperrit to un, mother," said Joan anxiously: "'tis sure to stir his temper up. But there!" she added despondingly, "what can anybody do? 'Tis all they ha' got to fly to. There's Jerrem at it fro' mornin' to night; and as for uncle, dear sawl! he's as happy as a clam at high watter."

"Iss, I reckon," said Mrs. Tucker: "it don't never matter much what goes wrong, so long as uncle gets his fill o' drink. I've said scores o' times uncle's joy 'ud never run dry so long as liquor lasted."

"Awh, well," said Joan, "I don't know what us should ha' done if there'd ha' bin no drink to give 'em: they'd ha' bin more than Eve and me could manage, I can tell 'ee. Nobody but ourselves, mother, will ever know what us two maidens have had to go through."

"You've often had my thoughts with 'ee, Joan," said Mrs. Tucker, her eyes dimmed by a rush of motherly sympathy for all the girls must have suffered; "and you can tell Eve (for her'll take it better from you than from me) that Adam's allays a-thinkin' of her, and begged and prayed that she wudn't forget un."

"No fear o' that," said Joan, anxious that her mother should depart; "and mind now you say, no matter what time 'tis, directly I'se seen Jonathan and knows 'tis safe for we somebody shall bring un word to come back, for Eve and me's longin' to have a sight of un."

Charged with these messages, Mrs.

Tucker hastened back to the mill, where all had gone well since her departure, and where she found Adam more tractable and reasonable than she had had reason to anticipate. He listened to all Joan's messages, agreed with her suspicions, and seemed contented to abide by her decision. The plain, unvarnished statement which Mrs. Tucker gave of the misery and gloom spread over the place affected him visibly, and her account of the two girls, and the alteration she had seen in them, did not tend to dispel his emotion.

"As for Joan," she said, letting a tear escape and trickle down her cheek, "'tis heart-breakin' to look at her. Her's terrible wrapped up in you, Adam, is Joan — more than, as her mother, I cares for her to awn to, seein' how you'm situated with Eve."

"Oh, Eve never made no difference 'twixt us two," said Adam. Then, after a pause, he asked, " Didn't Eve give you no word to give to me?"

"Well, no," said Mrs. Tucker: then, with the determination to deal fairly, she added quickly, "but her was full o' questions about 'ee, and that 'fore I'd time to draw breath inside the place." Adam was silent, and Mrs. Tucker, considering the necessity for further explanation & moved by the compromise she had made, continued: "You see, what with Jerrem and uncle, and the drink that goes on, they poor maidens is kept pretty much on the go; and Eve, never bein' used to no such ways, seems terrible harried by it all."

"Harried?" repeated Adam, with ill-suppressed bitterness, "and well she may be; still, I should ha' thought she might have managed to send, if 'twas no more than a word, back to me."

#### CHAPTER XXXII.

UNDER the plea that, notwithstanding the lateness of the hour, Jonathan might still possibly put in an appearance, Adam lingered in his aunt's cheerful-looking kitchen until after the clock had struck eleven: then he very reluctantly got up, and, bidding Mrs. Tucker and Sammy good-night, betook himself to the mill-house, in which, with regard to his greater safety, a bed had been made up for him.

Adam felt that, court it as he might, sleep was very far from his eyes, and that, compared to his own society and the torment of thought which harassed and racked him each time he found himself

alone, even Sammy Tucker's company was a boon to be grateful for. There were times during these hours of dreary loneliness when Adam's whole nature seemed submerged by the billows of love — cruel waves, which would toss him hither and thither, making sport of his hapless condition, to strand him at length on the quicksands of fear, where a thousand terrible alarms would seize him and fill him with dread as to how these disasters might end. What would become of him? how would it fare with Eve and himself? where could they go? what could they do? — questions ever swallowed up by the constantly recurring, all-important bewilderment as to what could possibly have brought about this dire disaster.

On this night Adam's thoughts were more than usually engrossed by Eve: her form seemed constantly before him, distracting him with images as tempting and unsatisfying as is the desert spring with which desire mocks the thirst of the fainting traveller. At length that relaxation of strength which in sterner natures takes the place of tears subdued Adam, a softened feeling crept over him, and, shifting his position so that he might rest his arms against the corn-bin near, a deep-drawn sigh escaped him.

"Hist!"

Adam started at the sound, and without moving turned his head and looked rapidly about him. Nothing was to be seen: with the exception of the small radius round the lantern all was darkness and gloom.

"Hist!" was repeated, and this time there was no more doubt but that the sound came from some one close by.

A clammy sweat stood on Adam's forehead, his tongue felt dry and so powerless that it needed an effort to force it to move. "Who's there?" he said.

"Tis me — Jonathan."

Adam caught up the lantern, and, turning it in the direction whence the voice came, found to his relief that the rays fell upon Jonathan's face. "Odds rot it, lad!" he exclaimed, "but you've gived me a turn! How the deuce did you get in here? and why didn't ye come inside to the house over there?"

"I've a bin scrooged down 'tween these 'ere sacks for ever so long," said Jonathan, trying to stretch out his cramped limbs: "I reckon I've had a bit o' a nap too, for the time ha'n't a took long in goin', and when I fust come 'twasn't altogether dark."

"Tis close on the stroke o' twelve now," said Adam. "But come, what news, eh? Have ye got hold o' anything yet? Are they devils off for good? Is that what you've come to tell me?"

"Iss, they's off this time, I fancy," said Jonathan; "but 'twasn't that broffed me, though I should ha' comed to tell 'ee o' that too."

"No? What is it then?" demanded Adam impatiently, turning the light so that he could get a better command of Jonathan's face.

"'Twas 'cos o' this," said Jonathan, his voice dropping to a whisper, so that, though the words were trembling on his lips, his agitation and excitement almost prevented their utterance: "I've found it out—all of it—who blowed the gaff 'pon us."

Adam started forward: his face all but touched Jonathan's, and an expression of terrible eagerness came into his eyes.

"'Twas she!" hissed Jonathan—"she—her from London—Eve;" but before the name was well uttered Adam had thrown himself upon him and was grasping at his throat as if to throttle him, while a volley of imprecations poured from his mouth, denouncing the base lie which Jonathan had dared to utter. A moment more, and this fit of impotent rage over, he flung him violently off, and stood for a moment trying to bring back his senses; but the succession of circumstances had been too much for him; his head swam round, his knees shook under him, and he had to grasp hold of a beam near to steady himself.

"What for do 'ee sarve me like that, then?" muttered Jonathan. "I ain't a-tellin' 'ee no more than I've a-heerd, and what's the truth. Her name's all over the place," he went on, forgetful of the recent outburst and warming with his narration. "Her's a reg'lar bad wan; her's a-carr'ed on with a sodger-chap so well as with Jerrem; her's a——"

"By the living Lord, if you speak another word I'll be your death!" exclaimed Adam.

"Wa-al, and so you may," exclaimed Jonathan doggedly, "if so be you'll lave me bide 'til I see seed the end o' she. Why, what do 'ee mane, then?" he cried, a sudden suspicion throwing a light on Adam's storm of indignation. "Her bain't nawthin' to you—her's Jerrem's maid: her bain't your maid? Why," he added, finding that Adam didn't speak, "'twas through the letter I carr'ed from he that her'd got it to blab about. I

wishes my hand had bin struck off"—and he dashed it violently against the wooden bin—"afore I'd touched his letter or his money."

"What letter?" gasped Adam.

"Wa-al, I knows you said I warn't to take neither wan; but Jerrem he coaxes and persuades, and says you ain't to know nawthin' about it, and 'tain't nawthin' in it, only 'cos he'd a got a letter fra' she to Guernsey, and this was t' answer; and then I knawed, 'cos I seed em, that they was sweethearin' and that, and —"

"Did you give her that letter?" said Adam; and the sound of his voice was so strange that Jonathan shrank back and cowered close to the wall.

"Iss, I did," he faltered: "leastwise, I gived un to Joan, but t'other wan had the radin' in it."

There was a pause, during which Adam stood stunned, feeling that everything was crumbling and giving way beneath him—that he had no longer anything to live for, anything to hope, anything to fear. As, one after another, each former bare suggestion of artifice now passed before him clothed in the raiment of certain deceit, he made a desperate clutch at the most improbable, in the wild hope that one falsehood at least might afford him some ray of light, however feeble, to dispel the horrors of this terrible darkness.

"And after she'd got the letter," he said, "what—what about the rest?"

"Why, 'twas this way," cried Jonathan, his eyes rekindling in his eagerness to tell the story: "somebody dropped a bit of paper into the rendevoos winder, with writin' 'pon it to say when and where they'd find the 'Lottery' to. Who 'twas did it none knaws for sartin, but the talk's got abroad 'twas a sergeant there, 'cos he'd a bin braggin' beforehand that he'd got a watch-sale and that o' her'n."

"Her'n?" echoed Adam.

"Iss, o' Eve's. And he's allays a-showin' of it off, he is; and when they axes un questions he doan't answer, but he dangles the sale afront of 'em and says, 'What d'ee think?' he says; and now he makes his brag that he shall hab the maid yet, while her man's a-dancin' gallus-high a top o' Tyburn tree."

The blood rushed up into Adam's face, so that each vein stood a separate cord of swollen, bursting rage.

"They wasn't a-manin' you, ye knaw," said Jonathan: "'twar Jerrem. Her's played un false, I reckon. Awh!" and he gave a fiendish chuckle, "but us'll pay

her out for't, woan't us, eh? Awnly you give to me the ticklin' o' her ozel-pipe ; " and he made a movement of his bony fingers that conveyed such a hideous embodiment of his meaning that Adam, overcome by horror, threw up his arms with a terrible cry to heaven, and falling prone he let the bitterness of death pass over the love that had so late lain warm at his heart ; while Jonathan crouched down, trembling and awestricken by the sight of emotion which, though he could not comprehend nor account for, stirred in him the sympathetic uneasiness of a dumb animal. Afraid to move or speak, he remained watching Adam's bent figure until his shallow brain, incapable of any sustained concentration of thought, wandered off to other interests, from which he was recalled by a noise, and looking up he saw that Adam had raised himself and was wiping his face with his handkerchief. Did he feel so hot, then ? No, it must be that he felt cold, for he shivered and his teeth seemed to chatter as he told Jonathan to stoop down by the side there and hand him up a jar and a glass that he would find ; and this got, Adam poured out some of its contents, and after tossing it off, told Jonathan to take the jar and help himself, for, as nothing could be done until daylight, they might as well lie down and try and get some sleep. Jonathan's relish for spirit once excited, he made himself tolerably free of the permission, and before long had helped himself to such purpose that, stretched in a heavy sleep, unless some one roused him he was not likely to awake for some hours to come.

Then Adam got up and with cautious movements stole down the ladder, undid the small hatch-door which opened out on the mill-stream, fastened it after him, and leaping across stood for a few moments asking himself what he had come out to do. He didn't know, for as yet, in the tumult of jealousy and revenge, there was no outlet, no gap, by which he might drain off any portion of that passionate fire which was rapidly destroying and consuming all his softer feelings. The story which Jonathan had brought of the betrayal to the sergeant, the fellow's boastings and his possession of the seal Adam treated as an idle tale, its possibility vanquished by his conviction that Eve could have had no share in it. It was the letter from Jerrem which was the damning proof in Adam's eyes — the proof by which he judged and condemned her ; for had not he himself seen and wondered at

Jerrem's anxiety to go to Guernsey, his elation at finding a letter waiting him, his display of wishing to be seen secretly reading it, and now his ultimate betrayal of them by sending an answer to it ?

As for Jerrem — oh, he would deal with him as with a dog, and quickly send him to that fate he so richly deserved. It was not against Jerrem that the depths of his bitterness welled over : as the strength of his love, so ran his hate ; and this all turned to one direction, and that direction pointed toward Eve.

He must see her, stand face to face with her, smite her with reproaches, heap upon her curses, show her how he could trample on her love and fling her back her perjured vows. And then ? This done, what was there left ? From Jerrem he could free himself. A word, a blow, and all would be over : but how with her ? True, he could kill the visible Eve with his own hands, but the Eve who lived in his love, would she not live there still ? Ay ; and though he flung that body which could court the gaze of other eyes than his full fathoms deep, the fair image which dwelt before him would remain present to his vision. So that, do what he would, Eve would live, must live. Live ! Crushing down on that thought came the terrible consequences which might come of Jonathan's tale being told — a tale so colored with all their bitterest prejudices that it was certain to be greedily listened to ; and in the storm of angry passion it would rouse everything else would be swallowed up by resentment against Eve's baseness ; and the fire once kindled, what would come of it ?

The picture which Adam's heated imagination conjured up turned him hot and cold ; an agony of fear crept over him ; his heart sickened and grew faint within him, and the hands which but a few minutes before had longed to be steeped in her blood now trembled and shook with nervous dread lest a finger of harm should be laid upon her.

These and a hundred visions more or less wild coursed through Adam's brain as his feet took their swift way toward Polperro — not keeping along the open road, but taking a path which, only known to the inhabitants, would bring him down almost in front of his own house.

The night was dark, the sky lowering and cloudy. Not a sound was to be heard, not a soul had he seen, and already Adam was discussing with himself how best, without making an alarm, he should awaken Joan and obtain admittance. Usu-

ally bars and bolts were unknown, doors were left unfastened, windows often open; but now all would be securely shut, and he would have to rely on the possibility of his signal being heard by some one who might chance to be on the watch.

Suddenly a noise fell upon his ear. Surely he heard the sound of footsteps and the hum of voices. It could never be that the surprise they deemed a possibility had turned out a certainty. Adam crouched down, and under the shadow of the wall glided silently along until he came opposite the corner where the house stood. It was as he feared. There was no further doubt. The shutters were flung back, the door was half open, and round it, easing their tired limbs as best they might, stood crowded together a dozen men, the portion of a party who had evidently spread themselves about the place.

Fortunately for Adam, the steps which led up to the wooden orrel or balcony — at that time a common adornment to the Polperro houses — afforded him a tolerably safe retreat, and, screened here, he remained a silent watcher, hearing only a confused murmur and seeing nothing save an occasional movement as one and the other changed posts and passed in and out of the opposite door. At length a general parley seemed to take place: the men fell into rank and at a slow pace moved off down the street in the direction of the quay. Adam looked cautiously out. The door was now closed. Dare he open it? Might he not find that a sentinel had been left behind? How about the other door? The chances against it were as bad. The only possible way of ingress was by a shutter in the wall which overlooked the brook and communicated with the hiding-place in which his father lay secreted. This shutter had been little used since the days of press-gangs. It was painted in so exact an imitation of the slated house-wall as to defy detection, and to mark the spot to the initiated eye a root of house-leek projected out below and served to further screen the opening from view. The contrivance of this shutter-entrance was well known to Adam, and the mode of reaching it familiar to him: therefore if he could but elude observation he was certain of success.

The plan once decided on, he began putting it into execution, and although it seemed half a lifetime to him, but very few minutes had elapsed before he had crossed the road, ran waist-high into the

brook, scaled the wall, and scrambled down almost on top of old Zebedee, who, stupefied by continual drink, sleep, and this constant confinement, took the surprise in a wonderfully calm manner.

"Hist, father! 'tis only me — Adam."

"A' right! a' right!" stammered Zebedee, too dazed to take in the whole matter at once. "What is it, lad, eh? They darned galoots ha'n't a tracked 'ee, have 'em? By the hooky! but they'm givin' 't us hot and strong this time, Adam: they was trampin' 'bout inside here a minit agone, tryin' to keep our sperrits up by a-rattlin' the bilboes in our ears. Why, however did 'ee dodge 'em, eh? What's the manin' o' it all?"

"I thought they was gone," said Adam, "so I came down to see how you were all getting on here."

"Iss, iss, sure. Wa-al, all right, I s'pose, but I ha'n't a bin let outside much: Joan won't have it, ye know. Poor Joan!" he sighed, "her's terrible moody-hearted 'bout t' all; and so's Eve too. I never see'd maids take on as they'm doin'; but there! I reckon 'twill soon be put an end to now."

"How so?" said Adam.

"Wa-al, you mustn't know, down below, more than you'm tawld," said the old man with a significant wink and a jerk of his head, "but Jerrem he let me into it this ebinin' when he rinned up to see me for a bit. Seems one o' they sodger-chaps is carr'in on with Eve, and Jerrem's settin' her on to rig un up so that her'll get un not to see what 'tain't maned for un to look at."

"Well?" said Adam.

"Iss," said Zebedee, "but will it be well? That's what I keeps axin' of un. He's cock sure, sartin, that they can manage it all. He's sick, he says, o' all this skulkin', and he's blamed if he'll go on standin' it, neither."

"Oh!" hissed Adam, "he's sick of it, is he?" and in the effort he made to subdue his voice the veins in his face rose up to be purple cords. "He'd nothing to do with bringing it on us all? it's no fault of his that the place is turned into a hell and we hunted down like a pack o' dogs?"

"Awh, well, I dawn't know nuffin' 'bout that," said old Zebedee, huffily. "How so be if 'tis so, when he's got clane off 'twill be all right agen."

"All right?" thundered Adam — "how all right? Right that he should get off and we be left here? — that he shouldn't swing, but we must stay to suffer?"

"Awh, come, come, come!" said the old man with the testy impatience of one ready to argue, but incapable of reasoning. "'Tain't no talk o' swingin', now; that was a bit o' brag on the boy's part; he's so eager to save his neck as you or me either. Awnly Jonathan's bin here and tawld up summat that makes un want to be off to wance, for he says, what us all knaws, without he's minded to it you can't slip a knot round Jonathan's clapper; and 'tain't that Jerrem's afear'd o' his tongue, awnly for the keepin' up o' pace and quietness he fancies 'twould be better for un to make hisself scarce for a bit."

Adam's whole body quivered as a spasm of rage ran through him; and Zebedee, noting the trembling movement of his hands, conveyed his impression of the cause by bestowing a glance, accompanied with a pantomimic bend of his elbow, in the direction of a certain stone bottle which stood in the corner.

"Did Jonathan tell you what word 'twas he'd brought?" Adam managed to say.

"Noa: I never cast eyes on un. He warn't here 'bove a foo minits 'fore he slipped away, none of 'em knaws where or how. He was warned not to go anghist you," he added after a moment's pause; "so I reckon you knaws no more of un than us does."

"And Eve and Joan? were they let into the secret?" asked Adam; and the sound of his harsh voice grated even on Zebedee's dulled ears.

"Iss, I reckon," he said, half turning, "'cos Eve's got to do the trick: her's to bamfoozle the sodger. Odds rot it, lad!" he cried, startled at the expression which leaped into Adam's haggard face, "what's come to 'ee that you must turn round 'pon us like that? Is it the maid you's got a spite agen? Lors! but 'tis a poor stomach you's got to 'rds her if you'm angered by such a bit o' philanderin' as I've tawld 'ee of. What d'ee mane, then?" he added, his temper rising at such unwarrantable inconsistency. "I've knawed as honest women as ever her is that's a done that, and more too, for to get their men safe off and out o' way—iss, and wasn't thought none the wus of, neither. You'm growed mighty fancikul all to wance 'bout what us is to do and what us dussn't think o'. I'm sick o' such talk. 'Tain't nawthin' else fra' mornin' to night but Adam this and Adam that. I'm darned if 'tis to be wondered at if the maid plays 'ee false: by gosh! I'd do the trick, if I was she, 'fore I'd put up with

such fantads from you or either man like 'ee. So there!"

Adam did not answer, and old Zebedee, interpreting the silence into an admission of the force of his arguments, forbore to press the advantage, and generously started a fresh topic. "They's a tawld 'ee, I reckon, 'bout the bill they's a posted up, right afore the winder, by the Three Pilchards," he said. "Iss," he added, not waiting for an answer, "the king's pardon and wan hundred pound to he who'll discover to 'em the man who 'twas fired the fatal shot. Wan hundred pound!" he sneered. "That's a fat lot, surely; and as for t' king's pardon, why 'twudn't lave un braithin'-time to spend it in—not if he war left here, 'twudn't. No fear! Us ain't so bad off yet that either wan in Polperro 'ud stink their fingers wi' blid-money. Lord save un! sich a man 'ud fetch up the civil hisself to see un pitched head foremost down to bottom o' say, which 'ud be the end I'd vote for un, and see it was carr'd out too—iss, tho' his bones bore my own flesh and blid 'pon 'em, I wud;" and in his anger the old man's rugged face grew distorted with emotion.

But Adam neither spoke nor made comment on his words. His eyes were fixed on mid-air, his nostrils worked, his mouth quivered. Within him a legion of devils seemed to have broken loose, and, sensible of the mastery they were gaining over him, he leaped up and with the wild despair of one who catches at a straw to save him from destruction, it came upon him to rush down and look once more into the face of her whom he had found so fair and proved so false.

"What is it you'm goin' to do, then?" said Zebedee, seeing that Adam had stooped down and was raising the panel by which exit was effected.

"Goin' to see if the coast's clear," said Adam.

"Better bide where you be," urged Zebedee. "Joan or they's sure to rin up so soon as 'tis all safe."

But Adam paid no heed: muttering something about knowing what he was about, he slipped up the partition and crept under, cautiously ascertained that the outer room was empty, and then, crossing the passage, stole down the stairs.

The door which led into the room was shut, but through a convenient chink Adam could take a survey of those within. Already his better self had begun to struggle in his ear, already the whisper

which desire was prompting asked what if Eve stood there alone and — But no, his glance had taken in the whole : quick as the lightning's flash the details of that scene were given to Adam's gaze — Eve, bent forward, standing beside the door, over whose hatch a stranger's face was thrust, while Joan, close to the spot where Jerrem still lay hid, clasped her two hands as if to stay the breath which longed to cry, "He's free!" . . . The blow dealt, the firebrand flung, each evil passion quickened into life, filled with jealousy and mad revenge, Adam turned swiftly round and backward sped his way.

"They'm marched off, ain't 'em?" said old Zebedee as, Adam having given the signal, he drew the panel of the door aside. "I've a bin listenin' to their trampin' past. Why, what's the time, lad, eh? — must be close on break o' day, ain't it?"

"Just about," said Adam, pushing back the shutter so that he might look out and see that no one stood near enough to overlook his descent.

"Why, you bain't goin' agen, be 'ee?" said Zebedee in amazement. "Why, what for be 'ee hikin' off like this, then — eh, lad? Lord save us, he's gone!" he exclaimed as Adam, swinging himself by a dexterous twist on to the first ledge, let the shutter close behind him. "Wa-al, I'm blamed if this ain't a rum start! Summat gone wrong with un now. I'll wager he's a bin tiched up in the bunt somethows, for a guinea; and if so be, 'tis with wan o' they. They'm all sixes and sevens down below; so I'll lave 'em bide a bit, and hab a tot o' liquor and lie down for a spell. Lord send 'em to know the vally o' pace and quietness! But 'tis wan and all the same —

Friends and faws,  
To battle they gaws:  
And what they all fights about  
Nawbody knows.

It was broad daylight when Joan, having once before failed to make her uncle hear, gave such a vigorous rap that, starting up, the old man cried, "Ay, ay, mate!" and with all speed unfastened the door.

Joan crept in and some conversation ensued, in the midst of which, as the recollection of the events just past occurred to his mind, Zebedee asked, "What was up with Adam?"

"With Adam?" echoed Joan.

"Iss: what made un start off like he did?"

Joan looked for a minute, then she lifted the stone bottle and shook its contents. "Why, whatever be 'ee tellin' up?" she said.

"Tellin' up? Why, you seed un down below, didn't 'ee? Iss, you did, now."

Completely puzzled what to think, Joan shook her head.

"Lor' ha' massy! don't never tell me he didn't shaw hisself. Why, the sodgers was barely out o' doors 'fore he comes tumblin' in to shutter there, and after a bit he says, 'I'll just step down below,' he says, and out he goes; and in a quarter less no time back he comes tappin' agen, and when I drawed open for un by he pushes, and 'fore I could say 'Knife' he was out and clane off."

"You haven't a bin dreamin' of it, have 'ee?" said Joan, her face growing pale with apprehension.

"Naw, 'tis gospel truth, every ward. I've a had a toothful of liquor since, and a bit o' caulk, but not a drap more."

"Jerrem's comin' up into t'other room," said Joan, not wishing to betray all the alarm she felt: "will 'ee go into un there the whiles I rins down and says a word to Eve?"

"Iss," said the old man, "and I'll freshen mysen up a bit with a dash o' cold watter: happen I may bring some more o' it to my mind then."

But, his ablutions over and the whole family assembled, Zebedee could throw no more light on the subject, the recital of which caused so much anxiety that Joan, yielding to Eve's entreaties, decided to set off with all speed for Crumplehorne.

"Mother, Adam's all right? ain't he here still, and safe?" cried Joan, bursting into the kitchen where Mrs. Tucker, only just risen, was occupied with her house-duties.

"Iss, plaise the Lord, and, so far as I knaws of, he is," replied Mrs. Tucker, greatly startled at Joan's unexpected appearance. "Why, what do 'ee mane, child, eh? But there!" she added starting up, "us'll make sure to wance and know whether 'tis lies or truth we're tellin'. Here, Sammy, off ever so quick as legs can carry 'ee, and climber up and fetch Adam back with 'ee."

Sammy started off, and Joan proceeded to communicate the cause of her uneasiness.

"Awh, my dear, is that all?" exclaimed Mrs. Tucker, at once pronouncing sentence on poor old Zebedee's known failing: "then my mind's made easy agen.

There's too much elbow-crookin' 'bout that story for me to set any hold by it."

"Do 'ee think so?" said Joan, ready to catch at any straw of hope.

"Why, iss; and for this reason too. I ——"

But at this moment Sammy appeared, and, without waiting for him to speak, the two women uttered a cry as they saw in his face a confirmation of their fears. "Iss, 'tis every ward true: he's a gone shure 'nuf," exclaimed Sammy; "but by his own accord, I reckon, 'cos there ain't no signs o' nothin' bein' open 'ceptin' 'tis the hatch over by t' mill-wheel."

"Awh, mother," cried Joan, "whatever can be the manin' of it? My poor heart's a sinkin' down lower than iver. Oh Lord! if they should ha' cotched un, anyways!"

"Now, doan't 'ee take on like that, Joan," said Mrs. Tucker. "'Tis like temptin' o' Providence to do such like. I'll be bound for't he's safe home amongst afore now: he ain't like wan to act wild and go steppin' into danger wi' both his eyes wide open."

The possibility suggested, and Joan was off again, back on her way to Polperro, too impatient to wait while her mother put on her bonnet to accompany her.

At the door stood Eve, breathless expectation betraying itself in her every look and gesture. Joan shook her head, while Eve's finger, quick laid upon her lip, warned her to be cautious.

"They're back," she muttered as Joan came up close: "they've just marched past and gone down to the quay."

"What for?" cried Joan.

"I don't know. Run and see, Joan: everybody's flocking that way."

Joan ran down the street, and took her place among a mob of people watching with eager interest the movements of a soldier who, with much unnecessary parade and delay, was taking down the bill of reward posted outside the Three Pilchards. A visible anticipation of the effect about to be produced stirred the small red-coated company, and they wheeled round so as to take note of any sudden emotion produced by the surprise they felt sure awaited the assembly.

"Whatever is it, eh?" asked Joan, trying to catch a better sight of what was going on.

"They'm stickin' up a noo reward, 't seems," said an old man close by. "'Tain't no ——"

But the swaying back of the crowd

carried Joan with it. A surge forward, and then on her ear fell a shrill cry, and as the name of Jerrem Christmas started from each mouth a hundred eyes seemed turned upon her. For a moment the girl stood dazed, staring around like some wild animal at bay: then, flinging out her arms, she forced those near her aside, and rushing forward to the front made a desperate clutch at the soldier. "Speak! tell me! what's writ there?" she cried.

"Writ there?" said the man, startled by the scared face that was turned up to him. "Why, the warrant to seize for murder Jerrem Christmas, living or dead, on the king's evidence of Adam Pascal." And the air was rent by a cry of unutterable woe, caught up by each voice around, and coming back in echoes from far and near long after Joan lay a senseless heap on the stones upon which she had fallen.

From Fraser's Magazine.

#### A FORGOTTEN EMPIRE IN ASIA MINOR.

It was a warm sunny morning towards the end of September when I left the little town of Nimphi under the protection of an escort of soldiers. Nimphi lies about twenty miles inland from Smyrna, at the foot of a lofty crag, the sides of which are hollowed into tombs. We rode up the steep, narrow street of the little town, and, leaving behind us the stately shell of a ruined Roman palace, turned eastward towards the plain of the Hermus where the kingdom of Lydia once grew up and became great. On our left was the huge mass of Mount Sipylus, the rounded form of its eastern shoulder descending abruptly into the plain below, while on our right rose a rugged line of hills, the furthermost spur of Tmolus, broken into ravines and dark with forests. Our path led along their slope, past bushes each of which had to be examined in advance to make sure that no brigand was hidden behind it, until, after a ride of some two or three hours, we forded the Kara-su, or Black Water, clambered up the bank on the other side, and, forcing our way through a thick undergrowth of shrubs, found ourselves in the gorge of the Karabel, the object of the morning's ride. The gorge is a narrow one, opening out on the north opposite the eastern shoulder of Sipylus, and leading on the south, by a rude and little-frequented track, into the plain of the Kayster and

the once fertile district of Ephesus. On either side rises an almost precipitous cliff, covered with trees and bushes, and tenanted only by brigands, while a similar cliff shuts in the pass in front, and gives good reason to the Turkish name of the place, the Kara-bel, or Black Forest.

But this Black Forest conceals some of the most curious and interesting monuments in the world, monuments that take us back to a long-forgotten day, when as yet the Greeks were destitute of culture and art, when Gyges had not founded his dynasty hard by at Sardes, or Kresus ruled over the Lydian empire. They have risen up from the dead, as it were, during the last two years, to tell us of a power which had its seat far away on the banks of the Euphrates, but which carried its armies to the very shores of the Aegean Sea and helped the Phoenicians in communicating to the nations of the west the civilization of Assyria and Babylon.

In the year 1839 the Rev. J. C. Rehouard discovered, high up above the path on the eastern side of the valley, a carving in the rock. The stone has been hollowed out into a niche, within which stands the figure of a man, six feet high, with the Phrygian cap on the head, boots with turned-up ends on the feet, a quiver slung at the back, and a spear in the left hand. The whole carving is of a very marked and peculiar character, and the art to which it testifies must have had a long and independent development.

But, as we now know, it does not stand alone. Step by step, region by region, we can trace it along the two high-roads that traversed Asia Minor and met in the Lydian capital, the one running from the Halys through Phrygia, the other passing the Cilician Gates and the rugged mountains of Lykaonia. At a place called Ghiaur-Kalessi, "the fortress of the infidel," near the villages of Hofadja and Kara-omerlu, about nine hours to the south-west of Angora, the ancient Anycra, and upon the old line of road which led from Armenia to Lydia, M. Perrot has discovered an ancient fortress, and beside it a rock carved into the likeness of two men, nine feet in height, who reproduce even to the smallest details the art and peculiarities of the sculpture of Karabel. Here, too, each figure carries his spear and quiver, wears the same short tunic and Phrygian cap, is shod with the same curious kind of "tip-tilted" boot, and has the same thick limbs and stunted growth. The walls of the fortress also that stand

hard by have a style of architecture quite their own. The stones of which they are composed are polygonal, but the lateral joints and external faces are dressed. The architecture, in fact, is that termed the third polygonal. The same style of building characterizes the walls of another prehistoric fortress at Boghaz Keui, supposed to represent the ancient Pteria, about fifty miles to the east of the lower Halys. At Boghaz Keui, too, there are sculptures which the first glance will show us belong to the same peculiar style of art, and were perhaps the work of the same people, as the sculptures of Karabel and Ghiaur-Kalessi. But they are on a far larger scale, and are intended to represent divinities rather than men. The flat surface of an amphitheatre of rock has been covered with these remarkable figures. There they stand, figure after figure, as it were in a triumphal procession, the goddesses crowned with mural crowns, the feet of some among them resting on leopards and lions, like certain deities on the carved gems of ancient Babylonia, while the gods appear in lofty tiaras or Phrygian caps, and all bear in their hands the symbols of their attributes and divinity. In one spot we see the double-headed eagle which in later days was chosen by the Seljukian sultans as their crest, and has since been made familiar to ourselves by the two empires of central Europe. In another place is the winged solar disk, imported originally from Assyria, but given a new and characteristic form of its own.

But the rocks of Boghaz Keui bear upon them something more precious than even these sculptured deities and their strange symbols. At one place an inscription of ten or eleven lines has been cut in relief upon the stone, while close to each divinity are other inscriptions cut in a similar way and containing the names of the gods to whom they are attached. The inscriptions are composed of a number of curious hieroglyphics, some resembling the hieroglyphics of Egypt, others altogether peculiar, such as tip-tilted shoes, tiaraed human heads, or the heads of animals in profile, while others again have lost all likeness to the objects of which they were originally the pictures.

These hieroglyphics, though still undeciphered, have already let us into the secrets of the sculptures they accompany. The figure at Karabel has exactly the same hieroglyphics, cut in relief, attached to it. Texier first detected them, but his drawing was incorrect, and the chief ob-

ject of my visit to the spot last year was to obtain a facsimile. Now that the facsimile has been obtained, we have positive proof that the race which produced the sculptures of Karabel, of Ghiaur-Kalessi, and of Boghaz Keui, used everywhere the same system of writing.

We now know what this race was. It was the race called Hittites in the Old Testament, Kheta and Khatti on the monuments of Egypt and Assyria, whom Mr. Gladstone would identify with the Ke-teians of the *Odyssey*. Their wars with Egypt are pictured on the walls of the great temples of Thebes and Abu-Simbel, and we may read at Karnak the text of a treaty made by the Egyptian monarch Ramses II., the Sesostris of Herodotus, with the king of the Hittites, after long years of inglorious struggle. The Hittites entered into alliance with Egypt upon equal terms, and the two monarchs agreed not to punish the political offenders who may have fled from the one country to the other during the period of mutual conflict. The Hittite text of the treaty, we are told, was engraved upon a tablet of silver; and although this was done more than three thousand years ago, it is not beyond the bounds of possibility that the tablet may yet be found.

For the northern capital of the Hittite prince has been discovered, and is now being excavated at the expense of the British Museum. It was called by the Hittites Carchemish, the city which commanded the fords of the Euphrates, on the high-road from Assyria to the west, and the spot where Pharaoh Necho was foiled by Nebuchadnezzar in his attempt to win for Egypt the sovereignty of western Asia. Its ruins are now called Jera-bis or Jerablus, an Arabic perversion of the Greek Hierapolis, "the sacred city" of the Asiatic goddess. Here, about sixteen miles to the south of the modern Birejik, was the chief seat of Hittite power and wealth, down to the time when its last king, Pisiris, was overcome by the armies of Sargon, and the Hittite capital became the seat of an Assyrian governor.

The first fruits of the excavations at Carchemish have reached this country in the shape of two fragments of stone, thickly covered with inscriptions in relief, and one of them still showing portions of the figure of a king. The dress of the figure, as well as the style of art to which it belongs, are identical with those of the figures of Karabel and Boghaz Keui, and, what is more, the hieroglyphics by which it is accompanied are identical

with those I copied on the Lydian monument. The Hittite origin of the monuments of Asia Minor to which I have been drawing attention is thus put beyond question.

Mr. George Smith, to whom along with Mr. Skene is due the credit of identifying the site of Carchemish, found a broken statue on the spot, with another inscription on the back in what we may now term Hittite characters. A leading peculiarity of these characters is that, wherever they have hitherto been met with, they are always in relief, never incised. This points to the fact that plates of metal must have been the first writing materials used by the Hittites, a fact which is further confirmed by other evidence.

The inscriptions disinterred at Carchemish are not the only ones that have come from the territory of the Hittites. Another exists at Aleppo, and five others in a hieratic form of the characters were noticed as long ago as 1812 by Burckhardt, built into the walls of houses at Hamath, where careful copies of them have since been made. Clay impressions of seals, too, were discovered by Sir A. H. Layard in the record-chamber of Sennacherib's palace, inscribed with strange characters, which long remained a mystery. But when attention was at length directed to the hieroglyphics of Hamath it turned out that the strange characters were Hittite hieroglyphics, and that the seals on which they were inscribed had probably been attached to treaties signed by Hittite kings.

In Lykaonia also, on the road traversed by Xenophon and the Ten Thousand, Hittite sculptures and hieroglyphics have been found carved on the rock. In the neighborhood of the silver mines of the Bulgar Dagh, Mr. Davis has come across them at Ibreez, or Ibris, a little to the south of Eregle, the ancient Kybistra, as well as at Bulgar Maden (near Chifteh Khan), while Mr. E. Calvert has told me of another in the same vicinity, where the characters are accompanied by the figure of a god clothed in the Hittite tiara, and the two smaller figures of his worshippers.

The "Paschal Chronicle," too, has preserved a curious passage, quoted probably from a writer of Asia Minor, which states that a figure of Perseus,\* carved

\* *Pasch. Chron.* ed. 1683, p. 39. It would seem from this that a figure similar to those at Karabel must have existed at Ikonium. There is another curious statement in the Chronicle, to the effect that the Dar-

in the rock, existed just outside the walls of Ikonium in Lykaonia, once called Amandra. It was in this same Ikonium that a legend was preserved of an ancient hero, Nannakos or Annakos, who, like the Biblical Enoch, lived before the age of the flood; and here, too, M. Texier saw the colored image of a warrior, half Hittite, half Greek, in style, beneath which are the fragments of an inscription in Kypriote characters.

But perhaps the most remarkable of all these Hittite monuments are the sculptures at Eyuk, near Boghaz Keui, first discovered by Hamilton and since photographed by Perrot. Here on the slope of a low hill are the remains of a palace, built not of limestone, like the other monuments of Asia Minor, but of dark granite. Ruined as it is, sufficient is left to show that it was modelled on the plan of the palaces of Assyria. At its entrance are two huge monoliths, with the faces carved into the likeness of sphinxes. But the sphinxes, though inspired by the art of Egypt, are profoundly different from the sphinxes of the valley of the Nile, and only their feet and faces are hewn out of the stone. One of the monoliths further bears upon it the same double eagle that is portrayed on the rocks of Pteria; but this double eagle once supported the figure of a god. The monoliths were flanked by walls, one of which is still fairly preserved. Along it runs a line of sculptures which carry, each one of them, the impress of Hittite art. Here we may see the Hittite warrior in his peculiar dress, there the Hittite priest robed as he is at Boghaz Keui. Elsewhere the building of the palace itself is brought before our eyes, and the workmen are represented ascending a ladder, or otherwise assisting in the work. Elsewhere, again, it is a bull, mounted on a sort of pedestal, and drawn with the skill that characterizes the delineation of the animal forms occurring among the Hittite characters; or again, it is a musician and a snake-charmer. Hard by is a man leading a monkey, a picture we might think somewhat out of place in so cold and northern a country. But, curiously enough, it is with monkeys that the Assyrian monuments associate the kinsmen of the Hittites who inhabited those very regions. On the walls of the palace of Assur-natsir-pal at Nimrud or Calah, an attendant in peaked boots is leading a

monkey, just as he is at Eyuk, and following his lord, who wears the characteristic cap and shoes of the Hittite race. The black obelisk of Shalmaneser, the son of Assur-natsir-pal, tells us that he too received apes and monkeys from the people of Muzri, in western Armenia, and among the tribute-bearers are some represented in the familiar Phrygian cap and tip-tilted shoes.

It is thus that we now know how, at an age of which history and tradition are alike silent, the influence and art and writing of the Hittites were making their way to the far west, carrying with them the elements of Eastern civilization. The twofold road they travelled over became one at Sardes, which was thus predetermined to be the future centre of power and civilizing influence throughout the western world. The interest that envelops the rock-carving of Karabel is accordingly very great; the fact that the onward march of Hittite civilization was stayed only by the waters of the Ægean, is there engraved, as it were, in stone. But this is not the only interest that attaches to the sculpture. Long before the days of Renouard or of Texier, the Ionic settlers in Lydia had gazed upon the sculpture and wondered whose it was. The "father of history," Herodotus himself, guessed, though vainly, at its origin. He tells us that "in Ionia are two figures carved on the rocks, one by the road that leads from the Ephesian territory to Phokaæ, the other by that which leads from Sardes to Smyrna; in each case a man is sculptured, three feet in height, the right hand armed with a spear and the left with bow, and the rest of his clothing to match, for it is Egyptian and Ethiopic; and the sacred characters of Egypt run carved across the breast from shoulder to shoulder, with this meaning: 'I won this land with my shoulders!' But who he was or whence he came," Herodotus continues, "is not known in Lydia, though it has become clear to me in Egypt," where the Greek historian had been listening to the tales told of Sesostris or Ramses II., the great antagonist of the Hittite princes, and of the sculpture Sesostris had engraved on the rocks of the valley of the Lycus in Syria.

The accuracy of the description of the figure given by Herodotus has, however, been called in question. The figure of the pseudo-Sesostris discovered by Renouard holds the spear in the left hand, not in the right, and the inscription does not run across the breast, but is at the

side above the left arm. Moreover, the second figure was long sought in vain; the paths that led from Ephesus to Phœkæ were all examined, and the search proved a fruitless one.

But at last all difficulties have been cleared away. The second pseudo-Sesostris has been discovered, not indeed where it was sought, but in the pass of Karabel itself, not twenty yards to the north of the first and better-known figure. It is the old story over again: we never find what we seek where we expect it to be; discoveries always come upon us where we least looked for them.

The second figure is the double of the first. But instead of being carved high above the road, it is sculptured out of a huge monolith that stands on the edge of the old path, traces of which I was still able to follow for some distance. Here it has been exposed to mutilation of all kinds; the face and part of the body are quite gone, and it has been soiled by the smoke of a Yuruk's fire, whose tent was pitched under the shelter of the stone when it was seen by Mr. Spiegelthal, three or four years ago. It looks the reverse way to the other figure, the spear being held in the right hand and pointing towards the north. In fact there can be no doubt that this is the very figure described by Herodotus, whose chariot may have helped to wear away the ruts I detected in the old road at its side. In the days of the Greek traveller it was far more conspicuous than the other sculpture more than seventy feet above him. The inscription may well have been carved across the breast, since this part of the figure is now totally destroyed, and there are no characters anywhere else on the stone. The two figures must have served as sign-posts, standing as they did at the junction of the two main roads from east to west and south to north, and the direction in which they looked served to point the way.

But they were more than this. They were a visible sign of Hittite conquest and empire. The power which caused them to be sculptured held the pass that led to the great cities of the extreme west. Ephesus, Smyrna, and Sardes must all have been in Hittite hands. Here were the centres to which the art and civilization of the Euphrates were brought, and from whence they could be spread over the islands of the Ægean and into the still barbarous Grecian world.

An echo of this Hittite dominion survives, I believe, in the legends of the

Amazons. The Amazons are to be found wherever the Hittites have left memorials of their presence. The Thermodon, where their kingdom was supposed to be, flowed in the near neighborhood of the Hittite sculptures of Eyuk and Boghaz Keui. The foundation of Ephesus was ascribed to them; Smyrna and Myrine, varying forms of the same name, were given an Amazonian origin; and though no legend has survived which connects the Lydian capital with the name of the warrior-maidens, the Assyrian art and mythology, that flourished there, must have been brought by Hittites rather than by Phœnicians, while there is much to show that Omphalé, the bride of the Lydian Herakles, was but the Hittite name of the Asiatic goddess. This Asiatic goddess, indeed, though of Babylonian origin, had one of her chief seats at Carchemish, where she was worshipped in later days under the title of Atargatis or Derketo, and the Amazons of Greek story, the handmaids of the Ephesian Artemis, were her Hittite priestesses. The rocks of Boghaz Keui have already taught us that the mural crown of Artemis or Kybèle was of Hittite descent.

The faint echo of Greek tradition has been confirmed by the contemporaneous records of Egypt. From the sixteenth to the twelfth centuries B.C., as we learn from them, the Hittites were at the zenith of their strength and glory. They held the balance of power between Egypt and Assyria, and were long the most formidable foe the Egyptians had to confront in Asia. Time after time did the Egyptian armies besiege their southern capital of Kadesh on an island of the Orontes, from which they were subsequently driven by the encroachments of the Semitic tribes, and once, at least, their northern capital of Carchemish was seriously threatened. But whether it were Kadesh or Carchemish that was attacked, the allies of the Hittites thronged to their aid from the most distant regions of the empire at the first sound of alarm. Colchians from the far north, Mysians from the far west, alike sent their contingents. In the reign of Thothmes III. we find the Hittites summoning to their aid the Masu or Mysians and the Dardanians of the Troad with their towns of Ilion (Iluna) and Pedasus (Pidaso). Two centuries later the Tekkri or Teukrians come to their help against that very Sesostris whose monuments Herodotus believed he saw in the records of the empire of his foes. And Sesostris, after twenty weary years of

fighting, had to confess that "the mighty people" of the Hittites were of equal power with himself.

It is probably about this period that the figures of Karabel were carved, and the Hittites began to aid the Phoenicians in carrying the torch of Eastern culture to the Greek world. Already in the nineteenth century B.C. the astrological reports, preserved in the library of the Babylonian monarch Sargon I., speak of the Hittites as dangerous rivals in the west, and, if Mariette-Pasha is right, they had led one at least of the dynasties of shepherd kings who had conquered Egypt some centuries before. As we have seen, their influence extended as far as the Hellespont in the age of Thothmes III. (B.C. 1600-1560), and this influence was still strong four centuries later. About B.C. 1130 the Assyrian king Tiglath-Pileser I. states that they were in possession of Syria, having subjected the Semitic Aramaeans to their sway, and Pethor, the city of Balaam, at the junction of the Sajur and the Euphrates, continued to belong to them until its capture by the Assyrians several centuries afterwards. It is possible that their occupation of Lydia may explain the statement of Herodotus, which derives the dynasty of the Herakleidae from Ninus, the son of Belus, whose date is placed by the Greek historian about B.C. 1200. We now have monumental evidence that the Assyrians never penetrated beyond the Halys, or even knew the name of Lydia itself, until Gog or Gyges sent an embassy and a present of two captive Kimmerian chiefs to Nineveh in the year 665 B.C. But just as the legend of Herakles was brought by Hittites to Lydia from Assyria and Babylonia, so too, the names of Ninus, or Nineveh, and Bel-Merodach of Babylon may well have been distorted reminiscences of Hittite supremacy.

The objects and forms of early art are surer evidences than these doubtful names of the westward extension of Hittite power. The art of Assyria, which was itself derived from that of Babylonia, came to Greece along two different channels. One of these channels was the Phoenicians with their trading ships and colonies, the other the Hittites moving along the high-roads of Asia Minor. The influence exercised by the Phoenicians was essentially commercial; it was at first purely maritime, subsequently colonial. The influence of the Hittites, on the other hand, was that of a conquering race; consequently it chiefly affected the

mainland of Asia Minor, and only indirectly the islands of the Aegean and the shores of Greece. Of this we have good proof in the fact that the first system of writing known in Greece was that introduced by the Phoenicians, whereas in Asia Minor and the adjacent islands the Phoenician alphabet had been preceded by another mode of writing, which I believe can be traced back to the hieroglyphics of Carchemish. But the very circumstance that the Hittites were a conquering race, not a body of merchants and sailors, caused the culture they brought with them to sink all the more deeply into the spirit of the nations of the west. Early Lydia became impressed by it in a way that early Greece never was impressed by the culture of Phoenicia. And the influence and impression were handed on to the feudal principalities of Achæan Greece. On the one hand the coasts of Asia Minor were occupied by Aeolian and Ionic and Doric colonies; on the other hand the inhabitants of Asia Minor took possession of the islands and founded dynasties in the Peloponnesus. The Karians, according to Thucydides, once dwelt in the Cyclades and buried their dead on the sacred isle of Delos, and tradition brought Pelops, the eponym of the Peloponnesus, with all his wealth and luxury, from the golden sands of the Paktōlos. Nay, Greek mythology itself was inextricably intertwined with that of Asia Minor. Omphalē and the Amazons, Midas and Gordius, Tantalus and the Khimæra, not to speak of the "tale of Troy divine," were all integral parts of old Greek story. Greek mythology and Greek art were equally indebted to the Phoenicians of Canaan and the natives of Asia Minor.

The fact becomes self-evident if we turn to the treasures of ancient Hellenic life and art which have been recovered from Mykenæ. The lions that guard the gate of the Akropolis are the counterpart of those discovered by Perrot on a rock-tomb at Kumbet, in Phrygia. The tombstones disinterred by Dr. Schliemann are wholly Hittite in their style and conception. So, too, the lion and bull made of goldleaf, and excavated from one of the tombs, remind us of the lion and bull sculptured at Eyuk. Among the patterns, again, met with at Mykenæ are several which go back to a Hittite original. Thus the palm-leaf is not only common on the terra-cotta dishes excavated by Dr. Schliemann at Hissarlik, but is embroidered on the robe of the figure found at Carchemish, and may be seen in

its earliest form engraved upon Babylonian cylinders. A certain class of early Greek vases, as is well known, present us with a type of drawing which cannot be referred to a Phœnician model, but which has much in it that suggests Hittite inspiration. The thick, round limbs and tall helmets come from Asia Minor, not from Canaan, like the Hittite tiara on the ivory head discovered in the prehistoric tombs of Sparta.

Art and myth, however, were not the only means whereby Hittite influence made itself felt in the distant west. Mr. Head has pointed out \* that the Babylonian silver mina of eighty-six hundred and fifty-six grains troy, which formed the standard for the money coined in Lydia and other parts of Asia Minor, as well as in Thrace, is identical with what the Assyrians called "the mina of Carchemish." It was received by the Hittites from Babylonia, and was carried by them to the nations of the distant west. Gyges and Kresus struck electron and silver coins according to its standard, and in times long before them the Trojans of Hissarlik had used it for purposes of exchange. Six wedges of silver, about seven inches long by two broad, were discovered in what Dr. Schliemann has christened "the treasure of Priam," and each of these wedges weighs about a third of the Babylonian maund. The hope of procuring silver seems to have been one of the main attractions of the Hittites to Asia Minor; at all events it is almost always in the neighborhood of silver mines that their memorials are found.

But the chief debt owed by the western world to the Hittites still remains unsaid. They were distinguished as a writing people; Kirjath-Sepher, or "book-town," was the primitive name of one of their cities in Palestine; Khilip-sar, "the prince of Aleppo," is specially mentioned on the Egyptian monuments as "the writer of books of the vile Khetas," and the hieroglyphics they used show that they were what it has fallen to the lot of but a chosen few among mankind to be, the inventors of a system of writing. This system of writing they carried with them to Lydia, and it is, I believe, the source of that curious syllabary generally called Cypriote, from the number of Cyprian inscriptions found written in it, but which was employed throughout Asia Minor before the introduction of the simpler Ionic

alphabet. Conservative Cyprus alone retained this syllabary long after it had passed out of use elsewhere; though most of the alphabets of Asia Minor kept certain of its characters to express sounds not represented by the Greek letters, and a short inscription found by Hamilton at Eyuk, in the close vicinity of the memorials of the Hittites, almost entirely consists of letters that belong to it.

And now who were these Hittites who played so important a part in the history of western Asia, and whose very name had been well nigh forgotten until but the other day? Unfortunately that is a question, the answer to which we can for the present only guess at. The inscriptions they have left behind them are still undeciphered, and more are needed before the key that will unlock them can be found. We must therefore be content with the evidence of the proper names that occur on the monuments of Egypt and Assyria. These point unmistakably to the fact that the language of the Hittites was neither Semitic nor Aryan, but belonged to a group of dialects spoken in early times by Cilicians, Comagenians, Moschians, profo-Armenians, and other neighboring tribes, and of which Georgian is probably a living representative. It is among this group that we must include the language of the cuneiform inscriptions of Van, which are still but partially deciphered.

Whatever may have been their language, however, the Hittites had very marked physical characteristics, peculiar dress and arms, and a spirit and policy that clearly separated them from their neighbors. Their peaked shoes indicate that they originally came from a cold country such as the highlands of Armenia, and this indication is confirmed by our finding the inhabitants of this very country represented on the Assyrian monuments in the same costume as the Hittites. They must have established themselves on the Euphrates at an early date, and spread from thence southward and westward. Their westward extension brought them into contact with the Lydians and Greeks, their southward extension with the Egyptians and Hebrews. To this is due the prominent place they hold in the Old Testament, but for which the scholars of Europe would have been as ignorant even of their name as were the writers of Greece and Rome. Ezekiel declares that Jerusalem was born of an Amorite father and a Hittite mother, and Uriah the Hittite was one of the

\* Academy for November 22, 1879.

officers of David. It was for the kings of the Hittites that Solomon imported horses from Egypt, and from among their princesses he sought himself wives, like the Egyptian monarchs before him. Israel and Heth, indeed, long continued in alliance against the common Syrian enemy, and when Benhadad broke up the siege of Samaria it was because he thought that the king of Israel had hired against him "the kings of the Hittites and the kings of the Egyptians." Hamath, too, which at one time was included within the Hittite territory, was the ally of David, and at a later day, as we learn from the records of Assyria, of the Jewish prince Uzziah also. Up to the last the existence of the Hittites depended on the success of their long struggle with their Semitic neighbors, whom they severed in two; and when their power and independence at last fell, it meant the final victory of the Semitic race.

Future exploration in Asia Minor, and above all the excavations that are being carried on at present on the site of Carchemish, have doubtless many more surprises for us. But no surprise can be greater than the resurrection of a forgotten people, who nevertheless played as important a part in the history of the world as Assyria or Egypt themselves. Brugsch-Bey has said, with justice, of "this cultivated and powerful people," that their "rule in the highest antiquity was of an importance which we can now only guess at." To us, perhaps, their chief importance lies in their influence upon the nascent civilization of the western world. The clue has at last been found to the old problem of the origin of art and culture in Asia Minor, and of that perplexing yet well-marked element in early Greek art, which was neither of home growth nor of Phœnician importation. We may now trace this element back to its first home on the Euphrates, where Assyro-Babylonian art was profoundly modified and intermingled with the forms and conceptions of Egypt, and we may watch its progress northward and westward until it meets the art of Phœnicia, sprung from the same ancestry, though less deeply changed, on the shores of the Aegean Sea. What it was at home we may still study in the lineaments of a bas-relief, brought from the Turkish castle of Birejik to the British Museum, on which is portrayed a Hittite monarch, robed in the peculiar costume of his people and overshadowed by the winged solar disk.

A. H. SAYCE.

From Blackwood's Magazine.

#### A TALK ABOUT SONNETS.

*Basil.* What were we to discuss this evening, Geoffrey?

*Geoffrey.* I am half inclined to say Nothing. Let us instead breathe the sweet scents of the roses on your terrace, listen to the ripple of the lake which washes against it (scarcely audible, though, in this profound calm), search out the dim forms of the mountains opposite amid the folded mists which are their covering for to-night and disturb neither the spirit of the flood nor the spirit of the fell, by any "rude invoking voice," from the deep sleep into which they seem to have fallen. But that is too lazy a proposition to make to your unconquerable activity, which cannot be charmed into idleness, even by the unwonted warmth of this sultry summer's evening. And I do remember what we promised to talk over—though the air was brisker and the outline clearer than now, when you moved, and I seconded, the resolution. We were to try to settle by our joint wisdom, helped by the fresher perceptions of our young friend here, which are the six grandest sonnets in the English language.

*Henry.* You must not look for much help from me, I fear. In the first place I am not sure that I know exactly what a sonnet is. It is a short poem, is it not?

*Geof.* Yes. But every short poem is not a sonnet; though I have heard people who ought to know better, call lyrics like the "Coronach" in "The Lady of the Lake," sonnets,—perhaps misled by the circumstance that song and sonnet both begin with an S.

*Bas.* Most men who have no special taste for poetry are content with such notions of it as they gained at college; and, as you and I know, there are no specimens of the sonnet to be met with in the poets of antiquity. The late invention of the troubadours, it is a wholly modern style of composition.

*Geof.* I will tell you a case in point. When I was a boy I wrote a somewhat irregular lyric, the thoughts expressed in which seemed to me fine; and I ventured, though with some trepidation, to show it to our worthy rector, who was a first-class man at Oxford. He suggested some alterations; made me feel, though very kindly, that my work was not quite so perfect as I had been tempted to believe; and then, quite un-

## A TALK ABOUT SONNETS.

expectedly, set up again the self-conceit which he had been knocking down, by showing me that at least there was one department of literature about which I knew more than he did. "With a little pains and polish, Jeff, you may make quite a striking sonnet of it," was the good man's kind conclusion. So you see, Henry, that if you confess yourself ignorant of the nature of a sonnet, you are ignorant in learned company. Had my rector given a tithe of the time to Petrarch or Milton which he had bestowed on Virgil and Horace, he would have seen that my juvenile poem was as like a sonnet as that carnation is like a rose.

*Hen.* His reverence's esteemed memory encourages me to ask you, without too great a shame at needing to put the question, What *is* a sonnet, then, exactly?

*Bas.* "Teach thy tongue to say, 'I do not know,'" is one of the best sentences in the Talmud. Tell him, Geoffrey.

*Geof.* A sonnet consists of fourteen lines of iambics, the first two quatrains of which would be just like two stanzas of "In Memoriam," provided that the second of these stanzas repeated the rhymes of the first, and in exactly the same order. Thus, you see, the first eight lines of a sonnet can have only two rhymes, each four times repeated; and that is one of the chief mechanical difficulties in its composition. In the remaining six, more liberty is allowed: they may either have two rhymes, each three times repeated—or three, each employed twice; only they must be interlaced in a manner satisfactory to the ear. One method, and the simplest, is to dispose the first four in a quatrain of alternate rhymes, and the last two as a couplet; but the other plan is the more usual. Such is the sonnet's outward shape.

*Hen.* Thank you; I think I understand. If only I had one to look at, the whole thing would be clear to me. Shall I find one in this book?

*Bas.* No. Besides, if you did, it is growing so dusk that it would try even your young eyes to read it. Suppose I say you one instead.

*Geof.* Do not recite one of the great masters', which we shall want later on. Say us one by some forgotten author, which is technically correct; and which will exemplify the rules I have been giving without distracting our attention from them by any extraordinary beauty.

*Bas.* Do you think I should have wasted my time by learning sonnets of

that sort? And yet, stay—I have exactly what you want. Here is one by a quite unknown author, cut to what you call the simplest pattern, for it closes with a rhymed couplet.

The casket rude, that held the spirit kind,  
Despised on earth, shall turn again to clay,  
And all its former features pass away,  
The while the spirit soareth unconfin'd :  
But, when the archangel's blast shall stir the  
wind,

It too shall rise, and seek the heavenly day,  
Joined to its kindred soul to rest for aye,  
Fashioned as lovely as its inward mind.  
But the fair form whose habitant was sin,  
And proud esteem of its own loveliness,  
Shall be transformed like to the heart within,  
As far from beauty as from holiness.  
Then, since thy soul at last shall mould its  
dwelling,  
See that in all things good it be excelling.

*Hen.* Thanks, many. I like the idea expressed in those words; though I see that this sonnet shows something of a 'prentice hand. "Loveliness" and "holiness" ought not to have been used as rhymes to each other, as their last syllables are the same. And it seems a little bold to talk of the *features* of a casket.

*Bas.* I only repeated it to help out Geoffrey's explanation. It was the work of a child of fourteen.

*Geof.* Did your Mary write it?

*Bas.* Yes. Now she peacefully awaits the fulfilment of its promise beside the little church in the bay. She was taken from me when she was eighteen. Dear child! how she loved Spenser and all our great poets! Had she lived, she might have written something of her own worth remembering. A happy matron, with children of hers playing round her, she might have been sitting now beside me, and helping us in our poetic researches. *Deo aliter visum est.*

*Geof.* She listens to the angels now; and their discourse is better than ours.

*Bas.* You remember something, I see, of her unfulfilled promise.

*Geof.* (*Aside.*) Remember her? I could sooner forget myself. (*Aloud.*) Let me recall to your recollection that I spent a long vacation here the summer before she died. With you and Mary I climbed many a fell, explored many a waterfall, had many a delicious moonlight row on the lake. If there is any one in the world, besides yourself, who knows what you lost in her, I am the man.

*Bas.* (*Murmurs half to himself.*)

In the great cloister's stillness and seclusion,  
By guardian angels led,

Safe from all evil, safe from sin's pollution,  
She lives whom we call dead.

(*After a pause.*) We must return to our subject. I will give you a second example of the outward structure of a sonnet, in which the concluding six lines rhyme after a more usual pattern than those in my dear daughter's. This second one is my own, yet I can fearlessly bid you praise the thought which it strives to embody, since I have borrowed it from St. Augustine; who, in his great treatise on the Trinity, describes the happy condition of the humble believer in Christ as compared with the proud Platonic philosopher, in these words: "For what furthers it one, exalting himself, and so ashamed to embark on the wood, to see from afar his home beyond the sea? Or what hinders it the humble, that at so great a distance he sees it not, while he is drawing nigh it on that wood whereon the other despairs to be carried?" By the wood, I need not tell you, he meant the cross.

*Geof.* Happy Augustine! His opponents, then, only differed with him as to the method of reaching the "home beyond the sea." They did not, as ours do, deny that that home existed anywhere. But let us hear how you versified the thought — a poem in prose as it stands.

*Bus.* Thus: —

Brother! my seat is on the mountain high;  
The wind which bends thy mast but fans my brow.  
Clear from my watch-tower lies to view what thou  
Dost strain thy gaze 'mid swelling seas to spy, —  
The goodly land, — the land of liberty  
And peace and joy, — land sought with prayer  
and vow  
Of old by many a voyager, who now  
Feeds on its beauty his unsated eye.  
Yet does thy seeming fragile bark prove strong  
To buffet with the waves, and day by day  
Hold on its course right forward to the shore :  
What now thou seest not thou shalt see ere long ;  
Whilst I, ah me ! *see* yet, but never more  
May hope to *tread* that good land far away.

*Hen.* Praise from me would be an impertinence, whether directed to yourself or to St. Augustine; otherwise I should say that we have here a noble thought very nobly expressed.

*Bas.* I must ascribe the latter half of your remark to the generous enthusiasm of youth; but with the former I entirely agree. The difference between barren

contemplation and fruitful action, the hopeless chasm (not to be spanned for man without divine aid) that separates knowing from doing, has seldom been illuminated by a brighter poetic flash than in Augustine's saying.

*Geof.* I wonder that poets do not oftener glean in the rich field of that great Father's writings. He, like Plato, was of the brotherhood, although he wrote in prose.

*Hen.* Do you ascribe to his poetic temperament those wonderful statements on natural history which occasionally enliven his sermons?

*Geof.* Give me an instance.

*Hen.* Surely you remember his explanation of the deaf adder in the Psalm, which, he says, stops one ear with its tail, and the other by laying it against the ground; and thus disables itself from hearing the voice of the charmer. Is not that an ingenious notion? But then, you know, unfortunately, an adder has no ears.

*Bas.* They hear quick enough somehow; but I allow the explanation in question to be as improbable as it is needless.

*Geof.* Come, Henry, confess. Your reading has been extensive, I know, for your age; but I doubt your having had time or inclination yet to read St. Augustine's long commentary on the Psalms. Who gave you that precious piece of information out of it?

*Hen.* My tutor. He was pointing out to us one day the superiority of the modern expositors of Scripture to the ancient, and he adduced this as an example of the faults of the latter. I remember thinking at the time that it did not prove much, because a man who had had no opportunity of getting up the facts of natural history correctly, might be great, nevertheless, at logic.

*Bas.* Give my compliments to your tutor, and tell him that you will do him credit some day. No thanks to him, though — unless his usual method of instruction is different from the sample with which you have favored us. A man who keeps a sharp look-out for the weak points of his intellectual superiors, and who feels no pleasure in surveying and exhibiting their excellences, is not a teacher to whom I should like to intrust a grandson of my own.

But we are not getting on very fast with our supposed subject. The next thing in order should have been an account of the true idea of a sonnet, — the

reason why its peculiar structure is the appropriate one.

*Geof.* That I take to be the following. A sonnet should consist of a thought and its consequence,—a syllogism, in fact, but one more of the heart than of the head. The main proposition should be the subject of the first eight lines. The difficulty raised by it in the mind should be disentangled, or the consequences naturally flowing from it majestically and skilfully drawn out, in the concluding six; so that the last line should satisfy mind and ear alike with a sense of a completed harmony at once of ideas and sounds. Sometimes, however, the first four lines will hold what I may call the main proposition, which may be followed by correlative statements extending to the sonnet's close.

*Bas.* That is the sonnet which answers best to the fable of the sonnet's origin.

*Geof.* What is that?

*Bas.* Upon a day Apollo met the Muses and the Graces in sweet sport mixed with earnest. Memory, the grave and noble mother of the Muses, was present likewise. Each of the fourteen spoke a line of verse. Apollo began; then each of the nine Muses sang her part; then the three Graces warbled each in turn; and finally, a low, sweet strain from Memory made a harmonious close. This was the first sonnet; and, mindful of its origin, all true poets take care to bid Apollo strike the key-note for them when they compose one, and to let Memory compress the pith and marrow of the sonnet into its last line.

*Geof.* That is a capital allegory; I never heard it before. Have you extemporized it for our instruction?

*Bas.* No; yet I forget where I found it. It sounds like an invention of an Italian of the Renaissance. But you had more to say about the sonnet.

*Geof.* Not much. I was merely going to add that at other times the sonnet seems to fall into three divisions,—a major, a minor, and a conclusion. This is the case in which it is best ended by a couplet.

*Bas.* My little girl's sonnet comes under that definition. Instinct, or good examples, taught the child to circumscribe her picture of the death and resurrection of the just within the first eight lines, to give the next four to the resurrection of the wicked, and to sum up her simple moral lesson in her closing couplet. A grand sonnet, by Blanco White, cut out on a similar pattern, comes into my mind. But we shall want it later on.

*Geof.* Your own poem is a specimen of the sonnet in two divisions. Its first eight lines set out the apparent superiority of the contemplative philosopher to the practical Christian; while its last six skilfully reverse the statement, closing with a wail over the sight that is never to become fruition.

I think my definition is sufficiently exact for our purpose, and explains why, especially in sonnets moulded like yours, the first eight lines are to be so intimately connected by rhyme. At their close there is a sort of natural halting-place, from whence the mind surveys the ground already traversed, and then turns to the steps which remain to be taken, either by way of natural consequence, or in unexpected contravention of what has gone before.

*Bas.* One thing strikes me though, and I hasten to mention it. Your correct definition, with which I have no quarrel otherwise, carries with it one most serious inconvenience. It is a fatally exclusive one. If we maintain it absolutely, we must deny the name of sonnets to some of Wordsworth's, to all Spenser's, to Drummond's —

*Geof.* Drummond, if I remember right, employs only two rhymes in his first eight lines, which is the essential thing, though he varies their position.

*Bas.* But what do you say to Shakespeare's? If yours is the description of the only receipt for a sonnet, then the name is a misnomer for any of his. They all consist, I think, of three quatrains like those in Gray's "Elegy" (and with no more connection as to rhyme than they have), loosely bound up at the end by a single couplet. Can you possibly maintain a definition of the sonnet which shall refuse that name to Shakespeare's and deny Wordsworth's assertion that

with this key  
Shakespeare unlocked his heart?

*Geof.* I see the difficulty, and I will make all the concessions that I can. I am ready to allow that had Petrarch written in English, our penury of rhymes, as compared with the Italian plenty, might — nay, probably would — have led him to modify his strict system; and that thus the deviations of Spenser and Shakespeare from their model are very excusable. I am willing, if you like, to make two classes of the English sonnet; the more loosely organized, at the head of which must stand Shakespeare's, and the more closely coherent, the type for which are

Milton's: but I cannot possibly consider the first class, whatever its merits may be, as fulfilling the requirements of the sonnet in the way in which Petrarch conceived them, and Milton and Wordsworth (in his happiest efforts) accomplished them.

*Bas.* Then you will give your vote, when we come to select our six, against even one of Shakespeare's best?

*Geof.* Decidedly. They none of them impress my mind as do Milton's; they lack his stately grandeur, and fail to give the same satisfactory sense of perfect finish. They may be perfect in their own line; but it is a line, in point of art, laid on a lower level than Milton's.

*Bas.* That may be true; but yet—but yet—what profound thoughts lurk in single lines of Shakespeare's sonnets! what a mysterious charm many of them possess! Who, that has seen as many years as I have, can read the one which begins, "Tired with all these, for restful death I cry," and not own sorrowfully how true is its indictment against "the world we live in"?

*Geof.* Hamlet, in his far-famed soliloquy, says the same things better.

*Bas.* Yes; but without the inimitable touch of tenderness at the end. What generous love, too, though extravagant and unjust in its generosity, breathes in the sonnet which begins, "No longer mourn for me when I am dead"! What a powerful enchanter's wand is waved (though for what a sorrowful purpose!) in the sonnet that opens with, "When to the sessions of sweet silent thought"! Before its sweet alliterative spell, grave after grave opens, and spectre after spectre of cares and losses long ago laid to sleep, comes forth to torment the mind; till, at its end—oh, splendid tribute to friendship!—the beloved name, spoken in the heart, not pronounced by the lips, puts them all to flight. Think, too, of that noble sonnet which tells us that love which can alter is not love at all, but something else; for that real love

is an ever-fixed mark,

That looks on tempests, and is never shaken;  
It is a star to every wandering bark,  
Whose worth's unknown, although his height  
be taken.  
Love's not Time's fool, though rosy lips and  
cheeks  
Within his bending sickle's compass come;  
Love alters not with his brief hours and  
weeks,  
But bears it out e'en to the edge of doom.

*Hen.* That is very fine.

*Geof.* And perfectly true.

*Bas.* Then, how well the diffidence of genius in its hours of despondency is expressed in the sonnet commencing, "If thou survive my well-contented day"! and how well its just self-confidence in another which I will repeat to you, for I happen to remember it!

Like as the waves make towards the pebbled shore,  
So do our minutes hasten to their end;  
Each changing place with that which goes  
before,  
In sequent toil all forwards do contend.

Nativity once in the main of light,  
Crawls to maturity, wherewith being crowned,  
Crooked eclipses 'gainst his glory fight,  
And Time that gave, doth now his gift confound.

Time doth transfix the flourish set on youth,  
And delves the parallels in beauty's brow;  
Feeds on the rarities of nature's truth,  
And nothing stands but for his scythe to mow.

And yet, to times in hope, my verse shall stand,  
Praising thy worth, despite his cruel hand.

*Geof.* I wonder whether Browning had the first four lines of that sonnet in mind when penning the speech in "The Ring and the Book," in which the criminal on the point of execution consoles himself by the reflection that all men are like waves hastening to break on the shore of death; that the privilege of the more fortunate is but to arrive a little slower, of the gayest only to dance a little more wildly in the sunshine, than the rest. It is a fine passage; but, I think, scarcely in place in the mouth of the base man to whom its writer has given it.

*Bas.* I do not read Browning. He speaks a language which I have never learned. The taste for his poems is an acquired taste, and to me they have remained unsavory delicacies.

*Geof.* You have missed something, then. Is Browning in favor at your university, Henry?

*Hen.* One of our tutors often quotes him; but any of our men who read poetry talk of Swinburne or Morris.

*Bas.* They should be ashamed to talk of Swinburne. If I catch you listening to him I shall feel inclined to scold you as Virgil did Dante, when he caught him hearkening to the ignoble discourse of Sinon and Master Adam, and to give his reason: "Chè voler ciò udire è bassa voglia."

*Geof.* I advise you to stick to Morris.

I am fond of him myself. He tells a story something in Chaucer's way.

*Bas.* Has he written any sonnets?

*Geof.* I understand your rebuke. To show that the fine one which you last repeated was not wholly new to me, I will make one remark upon it, which is this: Being differently organized to one of Petrarch's sonnets, it does not present the same ebb of thought, after the flood-tide, that they often do. Its main idea, that of the ravages of time, flows on uninterrupted through twelve lines, to dash itself, as against a rock, impregnable by the assaults of ocean, in the closing couplet, which so proudly declares the prerogatives of imperishable genius. Now by this an effect at once grand and simple is produced. Nevertheless, the more complex harmonies of the Petrarchan sonnet, as developed by our great English masters, are grander still.

*Bas.* I say not nay. Yet let us linger with Shakespeare a while longer. Which of us can remember another sonnet by him?

*Hen.* I think I can. I learned one at home many years ago. It is this one.

That time of year thou mayst in me behold  
When yellow leaves, or none, or few, do hang  
Upon those boughs which shake against the cold,  
Bare, ruined choirs, where late the sweet birds sang.

In me thou seest the twilight of such day,  
As after sunset faeth in the west,  
Which by-and-by black night doth take away,  
Death's second self, that seals up all in rest.

In me thou seest the glowing of such fire,  
That on the ashes of his youth doth lie,  
As the deathbed whereon it must expire,  
Consumed with that which it was nourished by.

This thou perceiv'st, which makes thy love  
more strong,  
To love that well which thou must leave ere long.

What makes you smile?

*Geof.* I could not help thinking how very appropriate those lines were to the state of the reciter. They must have been even more so, if possible, when you first learned them, as you say, *many years ago*. You repeated them, too, with such feeling. But seriously, it is well, I think, to hear them from young lips, sitting, as we do, with all the flush of summer around us. Under some circumstances they might be too sad.

*Bas.* I cannot walk under our lime-tree

avenue in November without thinking of them. It is anything but a "bare, ruined choir" at present — in a week or two its incense will breathe more fragrance than any diffused by Eastern spices; but when its green has turned to gold, and that gold paves the floor instead of enriching its roof, I see in it what Shakespeare saw — the image of a desolated temple.

*Hen.* The new-made ruins of his day must have been a sorry sight. We see them mellowed by the hand of time.

*Bas.* There are sadder ruins (if people only had eyes to see them with) than even fallen church-walls, — ruins, for which those who will have to answer should strive to place themselves in a moral attitude corresponding to Shakespeare's penitent, dying on his bed of ashes.

*Hen.* I wonder when Shakespeare wrote that sonnet? One would think at the very end of his life.

*Geof.* Men feel old at very various periods. Look at Coleridge, writing his pathetic "Youth and Age" before he was forty.

*Hen.* Did he really? Why, you would say its writer must have been aged seventy.

*Geof.* Look at Charles V., resigning the empire, worn out with age and infirmities, under sixty; while our statesmen now fight hard to gain, or retain, the command of a much larger empire at seventy and upwards; and not long ago our premier was over eighty.

But to return to the sonnet which you so well recited. You there see, as in the former one, a single idea prevailing up to the final couplet, which contains its consequence. The close of life is painted in three beautiful images, one for each quatrain, and then comes the moral which the friend is to draw from it.

*Bas.* Do you notice how the light fades away through the sonnet, answerably to the fading of life which it represents? In the first four lines you have daylight, although only that of an autumn afternoon; in the next four you have twilight, dying away into the night which prevails in the last four, only relieved by the red glow of embers, the fire in which will shortly be extinct.

*Geof.* That, perhaps, is the reason of the perfect satisfaction this sonnet gives one. Its sombre tints are in such complete harmony.

*Bas.* Can either of you repeat the sonnet which begins, "Poor soul, the centre of my sinful earth"?

*Hen.* I never even heard of it: my ac-

quaintance with Shakespeare's sonnets is of the slightest.

*Geof.* I only remember its last line, "And death once dead, there's no more dying then," accurately; but I know that it is one of the finest of Shakespeare's sonnets, viewed from the spiritual side.

*Bas.* Yes. It gives one good hope — especially when taken in connection with the undesigned and compendious confessions of faith in several of the plays — that our greatest poet's "ruined choir" was not unvisited by the seraphim. I wish I could recall its words. As I cannot, I will say you the only other of Shakespeare's sonnets that I remember just now. It is the pendant to one I mentioned before, and contains four yet more beautiful lines than it does. In that sonnet love chases away sad memories; in this he consoles for present sorrows.

When in disgrace with fortune and men's eyes,  
I all alone beweep my outcast state,  
And trouble deaf heaven with my bootless cries,  
And look upon myself, and curse my fate,

Wishing me like to one more rich in hope,  
Featured like him, like him with friends  
possess'd,  
Desiring this man's art, and that man's scope,  
With what I most enjoy contented least;

Yet in these thoughts myself almost despising,  
Haply I think on thee — and then my state,  
Like to the lark at break of day arising  
From sullen earth, sings hymns at heaven's gate:

For thy sweet love remembered, such wealth brings,  
That then I scorn to change my state with kings.

*Geof.* Truly a glorious sunrise of the soul. But oh, the weakness of human nature in its best estate! Fancy *Shakespeare* desiring another man's art, and discontented with his own vast possessions!

*Bas.* Should we not rather say, Great is the modesty, marvellous the unconsciousness, of the highest genius?

But you have indulged me long enough in wandering among what you have seen fit to call the more loosely organized sonnets. Let us now proceed to select our six best from those which present the higher type. I imagine that they will all be found in one volume, with "John Milton" on the title-page.

*Geof.* Possibly; but I propose, if only for variety's sake, that we should first

choose three of his, and then find our remaining three elsewhere.

*Bas.* Agreed, since you wish it. Now, Henry, which are your two favorites of Milton's sonnets?

*Hen.* The one on his blindness, and that on the massacre of the Waldenses. But then I know them by heart: some of the others I only know slightly, if at all.

*Geof.* Further knowledge will scarcely lead to an altered choice. They are two of Milton's very best. What concentrated power there is in that on the Piedmontese martyrs! With what few vigorous strokes it paints to us the ancient faith, the simple life, the mountain habitation, the undeserved suffering, of those hapless confessors whose

The vales redoubled to the hills, and they moans  
To heaven!

*Bas.* Do you notice the added force given by alliteration to the lines immediately preceding, which tell us how the bloody persecutors rolled

Mother with infant down the rocks?  
and the way in which that verse seems to make us hear the fall of the victims, and to hold our breath with horror as we watch them reach their sad resting-place, and lie motionless, shattered and dead, at the foot of the precipice?

*Geof.* If the expression in that sonnet is the more perfect, the thought expressed in the sonnet on Milton's blindness is the nobler.

*Bas.* Both the sonnets on that theme are very noble. The second to Cyriac Skinner has in it a strain of manly courage, which it does one's heart good to read after the unmanly complainings of some poets; and the one Henry mentioned is better than a sermon in the clear insight which it shows into what serving God really means. We owe much to Milton's blindness. I suppose it was to some extent the cause, instead of being the effect, of those grand visions to which Gray ascribes it. You well know, too, the pathos to which it has given rise in "Samson Agonistes" and in "Paradise Lost." Also, did you ever reflect that it is a blind man who speaks in the beautiful sonnet on Milton's dead wife?

Methought I saw my late espoused saint  
Brought to me, like Alcestis, from the grave,  
Whom Jove's great son to her glad husband gave,  
Rescued from Death by force, though pale and faint.

Mine, as whom, washed from spot of child-bed taint,  
Purification in the old law did save.  
And such, as yet once more I trust to have  
Full sight of her in heaven without restraint,  
Came vested all in white, pure as her mind :  
Her face was veiled ; yet, to my fancied  
sight,  
Love, sweetness, goodness in her person  
shined  
So clear, as in no face with more delight.  
But oh ! as to embrace me she inclined,  
I waked, she fled, and day brought back my  
night.

You observe he cannot even dream of his second wife's face. He was blind when he married her; and therefore, when she visits his slumbers, her face is veiled.

*Geof.* But so is that of Alcestis, to whom he compares her in Euripides.

*Bas.* For a different reason. There, on the one hand, Admetus is not to be startled by the too sudden revelation of his wife rescued from death ; on the other, there is yet to hang about the restored Alcestis a shadow of the dark and sacred place whence she has come — hence her total silence, hence the veil which shrouds her face. But Milton, not guilty of his wife's death like the selfish Admetus, looks forward in his fearless innocence to a "full sight of her in heaven without" the "restraint" which his blindness interposed on earth, and which her veil perpetuates in his dreams. So, when his Catherine vanishes, like Laura from his master Petrarch's gaze, borne away on the pinions of departing sleep, it is a double night that day, by a strange contradiction, brings back to him — the loss of the bright vision and the sense of his own sightless state.

*Hen.* I am glad that Milton loved the "Alcestis :" it is a very favorite play of mine. I hope you have seen Leighton's picture of her as she lies dead by the blue Aegean, among her beautiful living handmaids.

*Geof.* With Hercules grappling with Death in the background. It is the most charming English picture I know from a classic subject, and deserves all that Browning has said of it.

*Bas.* I should like to see it. Not "Alcestis" only, but all the extant dramas of Euripides were dear to Milton. How often we find him imitating him ! He even dares, with both Aeschylus and Sophocles claiming the title by better right, to style him "sad Electra's poet." By the way, we must have the sonnet in which that expression occurs. Geoffrey, will you say it to us ? and mind you give

"colonel" his three syllables in full in the opening line.

*Geof.* I will be French for the nonce. Why we English ever got to pronounce it in our present absurd way, I know not. You see that in Milton's day we knew better.

Captain, or colonel, or knight in arms,  
Whose chance on these defenceless doors  
may seize,  
If deed of honor did thee ever please,  
Guard them, and him within protect from  
harms.

He can requite thee ; for he knows the charms  
That call fame on such gentle acts as these,  
And he can spread thy name o'er lands and  
seas,  
Whatever clime the sun's bright circle  
warms.

Lift not thy spear against the muse's bower :  
The great Emathian conqueror bid spare  
The house of Pindarus, when temple and  
tower  
Went to the ground ; and the repeated air  
Of sad Electra's poet had the power  
To save the Athenian walls from ruin bare.

That seems to me an absolutely perfect sonnet. How well sense and sound correspond throughout it ! The poet's right to be protected, the duty and the profit of guarding him, fill the first eight lines ; while the two great examples of warriors who had acknowledged the claim, even allowing it to extend to inanimate things, echo through the two rhymes, thrice repeated, of the last six. The under-thought is the imperishable quality of genius ; typified by the standing of Pindar's house erect in the desolation, when the temples and towers of Thebes went down before the fierce assault of the Macedonian king.

*Bas.* You seem to hear the crash with which they came down, in Milton's lines ; and the dead stillness after, in the pause which the most careless reciter must make after telling us how they "went to the ground."

*Hen.* Lysander must have been superior in poetic sensibility to most of the Spartans if he really spared the walls of Athens after listening to a chorus of Euripides.

*Bas.* It is an example of the power of what Plato meant by music to bring men's minds into a justly tempered state. Notice also that it was Euripides, a poet who died somewhat out of favor with the Athenian people, to whom they owed this great service ; and mark the inference that the benefits conferred by true genius survive all discords of political parties or religious sects. How notably this is exemplified by Milton himself ! Both his

creeds, religious and political, differ widely from my own; yet it is my own fault if I ever read him without being the better for it.

But it is growing late; we must come to some conclusion about the four sonnets that we have been talking of. Which one shall we leave out? for we were only to choose three. Shall we omit that of the vision, on the ground of its imitation of the Italian school?

*Geof.* Certainly not; for here the pupil has surpassed his master.

*Bas.* Then, shall we give up the pleading on behalf of the poet's house, as on a less high theme than that on the Vaugeois, and as on a less touching subject than that on the poet's own affliction? For my own part, I think the subject represented ought to count for something in art; and that though a mean one, artistically treated, should be preferred to a noble one not done justice to, yet that a grand theme, really well handled, should (in spite of inevitable defects) be held to surpass a low one, even if wrought to all the perfection of which it is capable. I have no doubt that Teniers accomplished all he undertook more completely than Raphael what he aimed at; but I would far rather possess a masterpiece by the latter than by the former.

*Geof.* True; but scarcely relevant here. Milton's danger and his blindness were both personal concerns — neither, in themselves, grand subjects; and I can no more refuse my admiration to the poetic fervor which, treating of the one, calls the old Greek warriors to admonish the furious cavalier, and the old Greek poets to defend the sacred head of their worthy successor, than I can to the holier ardor which, reflecting on the other, unveils the order of the universe to us — the ministering angels, the obedient saints waiting patiently, with folded arms, till their own time for active service shall arrive.

*Hen.* What you have just said helps me out of a difficulty. I always thought it a little insincere in Milton to speak of himself in that sonnet as the man of the one talent in the parable — knowing that, at least in our modern sense of the word, his talents were so many. But may he not have taken "talents" more in what I believe to be their Scriptural sense — as opportunities for serving God? Those might well be few to a blind man.

*Bas.* I think he took talent in the usual sense — genius is very humble: reconsider the context, and you will see.

Speaking of our Lord's parables, the

reference to that of the talents has a fine effect in the sonnet on the blindness; but there is one much finer in another sonnet to the parable of the ten virgins.

*Geof.* Yes; I know it. If the first eight lines of that sonnet had equalled its last six, it would have been one of Milton's very best. These lines — it is addressed to a virtuous young lady, Henry — are as follows : —

Thy care is fixed, and zealously attends  
To fill thy odorous lamp with deeds of light  
And hope that reaps not shame. Therefore  
be sure

Thou, when the Bridegroom with his feastful  
friends

Passes to bliss at the mid-hour of night,  
Hast gained thy entrance, virgin wise and  
pure.

*Bas.* Can anything be finer?

*Geof.* Am I too fanciful in saying that Milton felt, not thought, that the orderly sequence of those three rhymes, each responded to in its turn without variation of place by the three succeeding, was the fittest to help us to image to ourselves the stately advance of that grand bridal procession which he here calls up before our minds?

*Bas.* I think you are right — especially in using the word *felt*. Those sorts of correspondences are a matter of instinct, as I believe, to true poets.

*Geof.* But to your question, Can anything be finer? Perhaps the sonnet in memory of a departed Christian friend. Will you say it to us, and let us judge?

*Bas.* Willingly.

When Faith and Love, which parted from thee  
never,

Had ripened thy just soul to dwell with God,  
Meekly thou didst resign this earthly load  
Of death, called life, which us from life doth  
sever.

Thy works, and alms, and all thy good en-  
deavor,

Stayed not behind, nor in the grave were  
trod;

But, as Faith pointed with her golden rod,  
Followed thee up to joy and bliss forever.  
Love led them on; and Faith, who knew them  
best

Thy handmaids, clad them o'er with purple  
beams

And azure wings, that up they flew so drest,  
And spake the truth of thee on glorious themes  
Before the Judge; who thenceforth bid thee  
rest,

And drink thy fill of pure immortal streams.

*Geof.* That sonnet always seems to me one of Milton's most perfect. How well his more usual interlaced arrangement of his last six lines suits his meaning here!

And then you will not find a single weak place in all the fourteen, search them as you may. Thought and expression are alike elevated, and flow equally in one roll of majestic harmony from the beginning to the close. Then, too, it is so clear. You can take it in at one hearing. Indeed, so you can the martyrs, the Alcestis sonnet, the sonnet where Ruth rhymes to ruth (a tiny blemish, I suppose), and that on the assault on the city. Now the long parenthesis in the sonnet on the blindness makes it need a second hearing.

*Bas.* It is well worth one. Was I far wrong when I said that we should find the six best sonnets in the English language to be Milton's? for the worst of the half-dozen which we have been talking about will be hard to match, let alone to surpass, by a specimen culled from any of our other poets' pages.

*Geof.* That may well be; and as to settling which are the three best of these six of Milton's, I think we might discuss the subject till midnight, and yet remain uncertain. I incline, myself, to choose the one you have last said to us, the one on the assault of the city, and the one on the slain Waldenses, as the three most absolutely perfect; but a very little arguing might unsettle me.

I must ask you to leave the question about Milton undetermined, for this is nearly the hour at which my nephew and his friend were to call and to row me home across the lake. Till their signal whistle sounds through the darkness, let us try and settle our last three great sonnets. We must give Wordsworth a fair chance.

*Bas.* Yes; his sonnets are good, very good, but only a few of them great enough to set by Milton's.

*Geof.* How pretty his two sonnets on sonnets are!

*Bas.* Yes; one of them a little irregular, though, according to your strict canons.

*Geof.* Those two fine sonnets of his on London asleep, and on our too great separation from nature by our artificial modern life—I mean that which begins, "The world is too much with us"—are perfectly regular. So is that good sonnet on Milton, which has in it these two perfect lines,—

Thy soul was like a star, and dwelt apart :  
Thou hadst a voice whose sound was like the sea.

*Bas.* Ditto the companion—less fine,

but oftener quoted—sonnet about "Plain Living and High Thinking."

*Geof.* Chiefly known for those few words, as is the case with so many of Wordsworth's poems.

*Bas.* Often with better reason. They sometimes contain one gem, and a good deal of twaddle. A sensible reader treasures the gem, and forbears to treasure its *entourage*. Now Wordsworth's sonnets on the fall of Venice and the enslavement of Switzerland are both good throughout; but their structure is defective, by the Petrarchan standard, especially the latter.

*Geof.* I wonder why Wordsworth, who altered so many things in his poems, maintained that anticipation of the final "heard by thee" in his eighth line of the last-named. No doubt, for some reason that seemed satisfactory to himself.

*Bas.* I cannot say that I think it would satisfy me if I knew it. I always, too, disapproved of "holy glee." It is an obvious make-shift for a rhyme. But, as you say, time presses. Give me therefore, reserving more minute discussion for some future day, your own favorite sonnet of Wordsworth, and then I will give you mine—incomparably his grandest, as I think.

*Geof.* My two favorites, on what I may call personal grounds though, are that written in the Trossachs, the autumn coloring of which is so very perfect—and that by the sea. They have each a slight imperfection of form, which I readily pardon; but which, if we were formally weighing Wordsworth's merits, would have to be considered. I will repeat to you the latter.

*Bas.* Say us both, please. I do not know the sonnet on the Trossachs so well as the other: I think it is not in my edition of the poet.

*Geof.* Here it is:—

There's not a nook within this solemn pass  
But were an apt confessional for one  
Taught by his summer spent, his autumn gone,  
That life is but a tale of morning grass,  
Withered at eve. From scenes of art which  
chase  
That thought away, turn, and with watchful  
eyes  
Feed it 'mid Nature's old felicities,  
Rocks, rivers, and smooth lakes more clear  
than glass  
Untouched, unbreathed upon. Thrice happy  
guest,  
If from a golden perch of aspen spray  
(October's workmanship to rival May)  
The pensive warbler of the ruddy breast  
That moral sweeten by a heaven-taught lay,  
Lulling the year, with all its cares, to rest.

*Bas.* Yes, that is lovely. It would be a pity to strike out "Nature's old felicities," for the sake of more largely completing your rhymes, would it not? Our lake looked like the three within the poet's reach, this evening, clearer "than glass untouched, unbreathed upon." Now carry us to the sunset on the sea.

*Geof.* Willingly.

It is a beauteous evening, calm and free ;  
The holy time is quiet as a nun  
Breathless with adoration ; the broad sun  
Is sinking down in its tranquillity ;  
The gentleness of heaven is on the sea :  
Listen ! the mighty being is awake,  
And doth with his eternal motion make  
A sound like thunder — everlastingly.  
Dear child ! dear girl ! that walkest with me  
here,  
If thou appear untouched by solemn thought,  
Thy nature is not therefore less divine :  
Thou liest "in Abraham's bosom" all the  
year ;  
And worshipp'st at the Temple's inner shrine,  
God being with thee when we know it not.

*Hen.* Do you like "not" rhyming with "thought"?

*Geof.* I cannot say that I do. But then one cannot stop to think about such things after having heard one of the greatest of God's works — the sea — interpreted, sight, sound, and all, in so splendid a manner. It leaves one "breathless with" admiration.

*Bas.* How beautiful, too, is the interpretation of the sweet unconsciousness of childhood! I wonder, however, at Wordsworth's use of "Abraham's bosom" as a synonym for God's presence with his little ones. It is an expression consecrated in Scripture to describe the end, not the beginning — the rest of the faithful departed.

*Hen.* As far as I understand you, sonnet four in your list is either to be one of the two last said, or one of several mentioned before, but not minutely discussed. I cannot congratulate you on the exactness of the results attained by your criticism.

*Geof.* It is all the fault of this sultry, hazy evening. What clearness of idea can one attain at such times? To-morrow, if the wind changes, or the first day that the west wind blows away the vapor, and the rocks and peaks stand out sharp against the blue sky, we three will scale our highest fell and make up our minds about everything.

*Bas.* I told you that I had made up my mind about Wordsworth's grandest sonnet — No. 5, as Henry may write it down

on the minutes of this important and most conclusive conference. It is not one of the sonnets thus far referred to. Its structure is, I think, the same as the Trossachs. It is the last of the ecclesiastical sonnets — that on Monte Rosa.

*Geof.* I am ashamed to say that I do not possess that little volume, and so have not read it for years. Do you know the Monte Rosa sonnet by heart?

*Bas.* Yes; and I have had to repeat it oftener than any of the others, because most people say what you say. Nearly always, too, I have had to repeat it twice, because the abundance of thought in it cannot be taken in at one hearing. The Monte Rosa, with its pure virgin snows, lit up by the heavenly glory, is taken as the symbol of the Incarnation in the first eight lines; then in the last six it becomes the emblem of the Christian's progressive holiness and hope in death. The transition from one to the other is abrupt, and would constitute a defect in the sonnet, if we did not remember that the poet trusted his readers to supply the suppressed connection between the two parts, — this, namely, that the member depends on the head, that man's life can be transfigured by a light from heaven only because God himself has become man. Fine throughout, this sonnet's last three lines appear to me truly magnificent. But judge for yourselves. It is as follows : —

Glory to God ! and to that Power who came  
In filial duty, clothed with love divine,  
Which made his earthly tabernacle shine  
Like ocean, burning with purpureal flame :  
Or like that Alpine mount which takes its  
name  
From roseate hues ; far kenned at morn and  
even,  
In quiet times, and when the storm is driven  
Across its nether region's stalwart frame.  
Earth prompts, heaven urges — let us seek the  
light,  
Mindful of that pure intercourse begun  
When first our infant brows their lustre won.  
So, like the mountain, may we glow more  
bright,  
Through unimpeded commerce with the sun,  
At the approach of all-involving night.

*Hen.* What a splendid idea! The glories of heaven caught and reflected more clearly as death approaches.

*Bas.* Yes; here the poet shows himself what a poet ought always to be — a divine interpreter of the parables of nature. The Alps are among the most splendid of natural objects; and are fit symbols, therefore, for the most ennobling truth revealed to man.

*Geof.* I remember reading that sonnet in bygone years to my dear father. I recollect, too, his exclamation, "I like it all but the last word. 'Night' is not like death to a Christian. He goes by it from night to day."

*Bas.* That objection could not be maintained. There is a sense in which death is called night to all alike in Scripture: "The night cometh when no man can work." It is the cessation of all our present activities, and our rest after labor. Of death, considered in those aspects, even such a night as is now settling down upon us may make a good emblem,—warm, still, and peaceful. But depend upon it, Wordsworth's "all-involving night" was of another sort. It was a fit image of death, considered as the revealer as well as the concealer,—as taking from us for a time the material world, in order to give us in exchange the higher world of ideas,—as veiling from us of a truth the works of creation, but only that it may unveil to us their Creator. It was of the kind which indeed hides the sun, but shows the stars. It was such a night as that of which poor Blanco White wrote in what I have heard called the finest sonnet in the English language—a sonnet which, at all events, is among the first, and which I fearlessly propose to you to stand by the Monte Rosa one, which I see you have admitted to be fifth, as the sixth among the six greatest.

*Geof.* I hear my comrades' signal from the bay, so my words must be brief; for this is not going to prove one of those privileged nights on which you can see millions of miles farther than you can by day. But you and I, dear friend, who have seen what we loved best on earth pass into that sacred twilight which those better nights image to us, have an especial interest in a sonnet which all must own to be first-rate alike in thought and in expression. Wish me good-night by saying it to me, and take in advance my assent to your proposition.

*Bas.* —

Mysterious Night! when our first parent knew  
Thee from report alone, and heard thy name,  
Did he not tremble for this lovely frame,  
This glorious canopy of light and blue?  
Yet 'neath a curtain of translucent dew,  
Bathed in the rays of the great setting flame,  
Hesperus, with the host of heaven, came,  
And lo! creation widened in man's view.  
Who could have thought such darkness lay  
concealed.  
Within thy beams, O sun! or who could find,

Whilst fly, and leaf, and insect stood revealed,  
That to such countless orbs thou mad'st us blind?  
Why do we, then, shun death with anxious strife?  
If light can thus deceive, wherefore not life?

From Temple Bar.  
THE PORTRAIT OF A PAINTER BY HIMSELF.

BY LADY POLLOCK.

#### PART II.

WHEN Miss Reynolds left Madame Barbarin, how divine the day seemed—every step was a joy to her feet! It was getting late: she called a little open carriage that was passing, and then how delicious the air felt and what ecstacy it was to live in such a world! All her fears were allayed, she was satisfied that this passionate delight was no delirium, for as she felt for Huguenay so Huguenay felt for her.

All traces of tears were gone when she joined her aunt, and her face was radiant.

"The walk has agreed with you," said Lady Reynolds.

"Oh! so much, so much!"

Lady Reynolds then resumed the consideration of Lord Helicon's manuscript, which she held in her hand: her niece sat silent, but longed to be questioned.

Never had her aunt been so little curious, so given up to her own thoughts. She seemed disposed to discuss Lord Helicon's comedy forever.

The sixth scene she thought would be better omitted, and she doubted the arrangement of the acts.

Act I was too long. A long first act was a mistake. The third was the best. There was an unfortunate falling off in the fourth.

"Oh, what does it matter?" said Nelly, petulantly; "and isn't Lord Helicon an old enough hand to distribute his acts for himself?"

Lady Reynolds looked astonished, and said: "You are evidently tired, Nell—your walk has been too much for you."

"Yes, perhaps it was too much," replied Miss Reynolds, going up to her aunt and embracing her.

"Oh, auntie, such wonderful things have happened!" She then, sitting at Millicent's feet, occasionally kissing her knees, related her visit to the Barbarins: perhaps it was well that she did not see

all the changes on her aunt's face. At the end Lady Reynolds said,—

"Well then, your fate is sealed."

Nelly jumped to her feet, and said,—

"God be thanked that you think so; I dared not."

"Your fate is sealed," Lady Reynolds repeated.

It was not till night came with its exclusive repose shutting out the commonplace and the irrelevant, that Miss Reynolds could fully appreciate her happiness.

The morning found her passion intensified, and her heart beat strangely till noon, when there was an engagement to breakfast at the house of Madame de Montmorin. M. de Montmorin was a well-known amateur of pictures, and there was a chance of meeting Huguenay in his circle. He was also an acquaintance of Lord Helicon's, and Nelly reflected with satisfaction that Lady Reynolds would find interest in the conversation of her old friend, and would be in no hurry to come away. But things did not turn out quite as she expected. True, Lord Helicon was present; but there were some dull aristocrats of the *ancienne noblesse* also there—and no Huguenay. The breakfast was well cooked; Madame de Montmorin was polite; Madame de Brissac was political; M. de Montmorin, handsome, intelligent, and courteous, seemed frozen on this occasion, and scarcely spoke till breakfast was half over, when he said: "I thought Huguenay was coming."

"He did condescend to make a half promise to that effect," replied madame, stiffly. "But he is so uncertain that I never think about him; these artists are impossible people."

"They have no manners," said Madame de Brissac.

"And no education," said an ignorant marquis.

"One ought to pity them, neglected as they are," said a coarse, insolent Madame le Père.

"Huguenay ought to know better," resumed Madame de Montmorin. "His family is respectable, and his brother is an officer in the dragoons."

"Whatever his brother or his family may be," said M. de Montmorin, in a tone calculated to impose silence, "Victor is a dear friend of mine."

After this remark there was a pause, which was interrupted by the announcement of M. Victor Huguenay.

He stood for a moment at the door

making earnest excuses for the lateness of the hour. He had met with a slight accident; an upset; it was nothing. There was no serious injury to any one; but there had been a crowd, an inquiry; he had been called upon by the *sergent de ville* to make some statements with regard to the driver; he was every minute hoping to get free or he would have sent a telegram.

His excuses were made with a grace of manner which pleased the most ill-disposed; and Madame de Montmorin perhaps felt a touch of self-reproach, for she presided at a fresh breakfast brought in for him with unusual cordiality. M. de Montmorin seated him next to himself, and an interesting conversation took place between them. They had, two years ago, been fellow travellers in the Tyrol; they had sketched together; they had gone off the high-roads, had sometimes lost their way; and had been once or twice overturned.

Huguenay dwelt on their adventures with delight. He vividly recalled certain scenes; all that he said was animating. Montmorin waked up, and he was fluent and accurate, while Victor's ideas were sometimes too abundant, and he then halted, seeking to shape them.

The conversation of these two made listeners of the rest. Only Lord Helicon now and then weaved in a discourse of his own with theirs. Madame de Brissac presently rose to go, and, while tying her bonnet-strings, lamented with Madame de Montmorin the foreign policy of the government. It was then that Huguenay was asked, by two or three gentlemen at once, whether it was true that he had refused to sell the portrait of himself.

"Quite true," he replied.

"And why?" asked Montmorin.

"Did you expect me to sell myself?" said Victor, smiling. "No; I wouldn't do it. It is well to paint such a thing for practice, and it might be well to give it to a friend; but, clearly, it could not be painted for sale."

"M. Huguenay is keeping it for some fair lady," said Madame St. Aignan, simpering.

A sudden flush came over Huguenay's dark face, and then Madame St. Aignan simpered more.

"It is one of your best pictures," said Montmorin, taking no notice of this interruption; "and all the critics have come round to you."

"I don't care about the critics," said Huguenay, "criticism is an art, of which

the art I follow should be independent : truth is my aim ; if I am true I am glad. But I don't read the critics. I have a subject just ready now ; of course (with a smile) I was too late with it for the Salon ; I fancy it better than anything else I have done."

"What is the subject ?"

"The sacking of Rome by the French, under Constable Bourbon."

"A capital subject," said Montmorin, "and one you are safe to treat well ; it gives room for variety of interest, and I like the sixteenth-century costume. When can one see it ?"

"Any day after to-morrow, at my studio, which I mean to open to my friends during the whole of next week." Huguenay now looked at his watch and said he must hurry away.

"Allow me before you go," said his host, "to introduce you to Lady and Miss Reynolds, both fond of art, and Miss Reynolds herself is an admirable — —"

"Oh, pray don't say that," interrupted Nelly with agitation.

"No, I won't say that," replied Montmorin, smiling. "I will only go through the regular process of introduction."

As soon as this was over Huguenay said, "I already know that Miss Reynolds is an artist, for Bellaria has told me — —"

"Ah, yes," said Lady Reynolds, "Bellaria is enthusiastic."

Miss Reynolds stooped and caressed Madame de Brissac's lap-dog ; perhaps she did not care to have her blushes seen. The company generally began to disperse ; Lady Reynolds permitted Lord Helicon to put on her mantle.

Miss Reynolds fastened the buttons of a becoming jacket, fitting tightly to her slender figure. They made their adieux and went down-stairs, but before they reached the last step Nelly knew that Huguenay was by her side.

He asked her opinion of some pictures at the Salon, and then said : "Yes, you are an artist, you feel like an artist ; I had heard so, often before."

"From Bellaria ?" stammered Nelly.

"Oh, no, not Bellaria ; another."

"Another ! oh, what other ?"

Huguenay looked down, he seemed suddenly confused, and for a moment pressed his hand upon his brow. He was perhaps doubting, or seeking a name ; he began to speak and stopped short, then he said, "I have heard it."

"Was it Madame Barbarin ?" asked Nelly.

"True," replied the painter, "true, that honest old woman has frequently spoken of you ; Miss Reynolds, I have known you long, and I have known you to be exceptional, not merely in art ; there are qualities superior to any kind or degree of talent, and these belong to you." As he concluded this sentence, which left Nelly in a state of extraordinary perturbation, he moved aside to make room for Lady Reynolds, who was just one step above them ; and when they all three reached the bottom of the stairs, he asked for the honor of their company at his studio in the course of the following week. Lady Reynolds accepted, and then with a parting look of singular interest at Miss Reynolds, he left them. After he was gone Nelly blushed, recollecting his look.

On their return home Lady Reynolds found a letter from Delorme, which informed her that he intended to come back to Paris the next day. There were a few other things in it intended to be agreeable to Nelly, and which were read out by her aunt with emphasis, but of which Miss Reynolds heard not one word. She, however, appeared to listen and nodded her head, saying "oh" or "ah" at every pause till the very end, when she found a pretext to leave the drawing-room and shut herself up in her bedroom for half an hour to caress her happy thoughts.

The next four or five days were passed in anticipation of the visit to the studio, which, when it took place, brought with it a certain sense of disappointment. Huguenay was surrounded by artists ; there was an eager discussion of his work ; he was sometimes explaining, sometimes arguing ; he was always engrossed — his picture was to be seen, but not himself.

The subject was treated with imaginative power. In the variety of expression, and in the vitality of the figures, the force of the artist was recognized. An occasional eccentric attitude gave the connoisseurs the advantage of something to censure ; but Nelly, indifferent to the buzz around her, gazed on a mother contemplating the body of her dead son, till her tears fell.

While Montmorin and a few journalists discussed the merits and the style of the artist, one who held a large note-book observed : "It is evidently a masterpiece of the impressionist school ; but I hold the impressionists to be all in the wrong," while another, holding forth with oracular emphasis, pronounced that the youth of the painter was to be discerned in the

classical fetters by which he had imprisoned a genius destined some day to exercise itself in bolder flights of the imagination.

"You think so?" was Huguenay's frequent answer to these remarks; but upon Miss Reynolds he fixed his eyes so attentively, that she dreaded to move because she wished to hold that attention forever.

Presently, however, Lady Reynolds summoned her to look at a picture of a different order, called "The Storm." It was a wonderful representation of nature in convulsion: there was a forest bending under the blast, and in the foreground a great oak uprooted was about to fall; a solitary rider, his cloak flying in the wind, was urging on his horse to escape from this danger and desolation.

Nelly stood before it silent and completely absorbed, hearing nothing; she remained thus till Lady Reynolds indicated that it was time to go.

Huguenay was advancing to open the door for them; but Bellaria, who had been aping knowledge till he was exhausted, proposed himself as cavalier to the ladies, and Huguenay with a parting salutation retired.

Bellaria had much to say during the walk home, and it was all about the painter, quite established now as "*my friend Victor*."

All Paris, he said, was astonished at his persistent refusal to sell the portrait of himself. Unheard-of sums had been offered for it, and there was a competition for the picture of "The Sacking of Rome" between M<sup>e</sup> de Montmorin and an Englishman, Sir William Bruce. Sir William had offered the highest sum, but Victor had assigned the picture to Montmorin, on the plea that he wished it to remain in France; but it was evidently an act of friendship.

Nelly afterwards spoke to Lady Reynolds of this proceeding as of a noble action, but her aunt could not be persuaded that it was so; she was, however, willing to invite Huguenay to her reception of the following Friday evening, and Nelly herself posted the note of invitation, with another for Henri Delorme. This she did on her way to see Madame Barbin, whom she described as the cleverest and most sympathetic woman she knew. She found her feverish, and more voluble and enthusiastic than before about the painter, who had taken the little Antoine into his studio to do odd jobs for

him and to watch him while he drew, for the boy had a talent.

"And why I called this man a god, I will now tell you," said Madame Barbin — "when he does you good, he never seems to be doing it; he leaves room for your pride."

"That," said Nelly, "is because he thinks so little of himself."

"And you," said Madame Barbin, "are just such another."

For this blending of the two identities together the old Frenchwoman received an embrace.

So much indeed was Nelly transported with her secret passion that she invested this worshipper of the painter with the halo of his glory. Her visits to the paper-hanger's family made other society seem flat. She found this untutored French artisan more eloquent and more capable of great ideas than all the fine ladies she met, with their minds and bodies cramped in the stays of fashion.

Lady Reynolds observed the exaltation of Nelly's manner, and feared that it might betray her at the Friday reception if Huguenay came; but she obtained from her a promise to be calm; and when the evening arrived, it was Lady Reynolds who looked flushed with anxiety, while her niece was pale and unnaturally still. All the accustomed visitors flocked in at the accustomed hour. It was an interesting society, limited by no narrow views — aristocrats, artists, the old *noblesse* and the young republic, literature, fashion, were represented there. Lady Reynolds could accept all shades of opinion and all varieties of nationality; the only thing she resolved to exclude was stupidity.

Yet they seemed commonplace to Nelly as they streamed in, probably because Huguenay was not among them. M<sup>e</sup> de Montmorin was an exception; he was the possessor of the great picture, and as he entered he was heard to ask: "Is Huguenay here?"

"Not yet," was the answer of Lady Reynolds, timidly spoken.

And "Is he often late?" Miss Reynolds added, and was scarcely heard, only just heard, as Montmorin testified by repeating her question before he answered it, which he did with his usual fluency and length. He explained that Victor could not always be relied upon; that he followed his moods — within bounds, however, for he was not selfish, only he had a certain artistic self-indulgence, and sometimes a few days together of forgetfulness; but

then no one could be angry with him, he was such a generous child of nature.

"And there he is at the door!" chimed in the metallic tones of Madame de Montmorin.

Nelly could hardly stand. Lady Reynolds observed her and pushed a chair towards her. Miss Reynolds threw herself into it and waited. She was soon surrounded; and now Delorme came in and advanced towards her. She had not thought of missing him. His pleasantest smile was on his face, and his eyes glittered. Her determination to explain herself to him rushed into the memory of Miss Reynolds, and she changed color. Delorme, misinterpreting the change, drew nearer to her.

He said, "With what pleasure I have returned to Paris to-day!"

"Paris," said Nelly, "is always pleasant."

"It is so now to me," said Henri; "it was not always."

"No place is pleasant always," said Nelly.

"There are associations which may make a place delightful forever," rejoined Delorme.

"Where have you been?" asked Nelly.

Henri replied that he had been to Lyons on business, and then told her of a new cup designed by him for his father, of which one model alone had appeared. It had been bought by the Duc d'A—for a large sum, and with the express stipulation that none other like it should be produced.

Nelly's attention wandered. There was a stir; a group had collected round an "Old Crome," belonging to Lady Reynolds, and Huguenay was on his knees examining the work with the ardor which he put into everything he did.

She addressed Lord Helicon, who was passing in front of her, and asked, "Was there anything to see?"

"Nothing at all," was the reply. "Only the 'Old Crome' you have seen all your life. I am looking for Madame Regnauld."

It was, therefore, impossible for Miss Reynolds to join the circle where she wished to be. Under these circumstances she made up her mind to speak to Henri so that he should understand her. Affecting to ask his advice for a friend in a difficult position, she put her own case before him with ingenuity. Some men, indeed, might have believed in the supposed friend; but Delorme was keen-

witted, thin-skinned, apprehensive, and in love. He did not doubt: he saw it all, and his answer was immediate.

"Your friend would do well to dismiss the man she does not love at once; and he must of necessity accept that dismissal as final. It is his bitter duty. Adieu, Miss Reynolds."

Nelly, whose eyes had been cast down, looked up. No hand was offered for a parting token. She was standing alone now.

"Do you know where Delorme is?" said Montmorin, advancing towards her from the "Old Crome" group.

Upon receiving a husky reply in the negative he turned away. Nelly's eyes jealously followed him, for he joined Huguenay, drew him into a remote corner, and held him there for some time. Presently Huguenay, smiling and pressing his friend's hand as he went, left the room. He was gone—gone with joyous looks, and he had not spoken one word to Miss Reynolds. She looked no longer at the door; she hurried out upon the balcony, and there, leaning on the balustrade, drew a long breath, as if greedy to swallow the cooler air. The gardens of the Champs Elysées glittered in the moonlight with a brilliancy of their own; their own audacious constellations were burning, and there were sounds of dramatic song pleasantly softened by distance. Nelly's tears fell fast.

"What can it mean?" she said—"what can it mean?" It was a habit of hers to speak to herself when greatly moved. She felt some one near her; was it a foolish hope that made her heart beat when she turned to look at him? If so, what a falling off! It was Bellaria. At that moment he was distasteful. Why was he there? What business had he to be a spy upon her tears? Another thought, however, altered her emotion: he had, perhaps, brought a message for her, and she was ready to listen. He came very close to her, and, with his Italian freedom, he laid his hand upon hers which clutched the balustrade. She flung up her hand; he fell back startled, but came to her again, and murmured in her ear tenderly,—

"Miss Reynolds, forgive me. I have sought you everywhere. I was detained at first: Montmorin, Victor, Helicon, detained me; believe how fevered I was! how I longed to throw them off! But now I am near you—close, close to you. Do not weep. Accept my assurance that, with my whole heart, I love you!"

What could be more intolerable than this? And how was Miss Reynolds to quench the fire within her? Could she maintain conventional decorum in replying to such a declaration? She assumed that he was intoxicated, and said,—

"Signor Bellaria, if you have anything to say to me when you are sober, I will answer you with sobriety. At present I beg you to allow me to pass."

Bellaria stood mute with amazement, and Nelly passed by him with a rapid movement, and continuing her course through the drawing-room, without looking to right or left, took refuge in the solitude of her own apartment.

So ended this long-looked-for evening. What impressions it left with Lady Reynolds will be seen in the dialogue which she held with Lord Helicon the next morning. He came to ask after Miss Reynolds. Her look, her manner, had struck him.

"Well they might strike you!" said Millicent. "Oh, what an evening — what misery! I cannot think of anything else; to you alone, our true friend, I dare to speak of it."

She went on to relate the last incidents of Huguenay's disappearance — Nelly's flight to the balcony, her tears, and Bellaria's insolent interpretation of them; and she added that when upon the departure of her guests she went to Nelly's room, she found her stretched on her bed completely dressed, asleep, breathing fast, her cheeks white and her eyelids red; by her side was a letter just begun to Sophie de la Roche:—

"Come, Sophie, with your strong heart, come to help me, for my spirit is broken. I have been insulted.

"Oh, do come."

The paper was blotted, the ink-bottle was left uncovered, the candles had burnt down to their sockets; everything in the room indicated the disorder of Nelly's mind. Would all this ever come right? Had not she, Lady Reynolds, known from the very first that this painter would prove a bane to them?

Lord Helicon replied that he did not hold this proved. After all, Huguenay had done nothing but leave the party too early, and he might have been forced to do that.

"He would not if he had cared for Nelly," said Lady Reynolds.

"That very thing might have made him do it," said Lord Helicon; "for, my dear Lady Reynolds, there are many ways

of loving — passion with some men becomes shyness; with others it becomes audacity; with some it is dumb, with others eloquent; and whatever else it may be, it is always unaccountable."

Lady Reynolds sighed; Lord Helicon smiled and begged her not to forget Madame de Montmorin's day. He must leave her now, he said, but he hoped to meet her on Madame de Montmorin's Wednesday. That day of reception, he said, was a sacred institution which it was a crime to pass over.

When the day came Lady Reynolds felt it a duty to obey this injunction, for Madame de Montmorin counted the absenteers and resented neglect; yet because she was frigid and prim she was often slighted. On this particular occasion there were but few women, and only two boys represented the male sex. The coarse Madame le Père and her angular, squinting daughter were there, with Madame St. Aignan, pretty and coquettish Madame de Brissac, Mrs. Grosvenor, a friend of Lady Reynolds, and Madame Reiss, a talkative Alsatian. The French ladies were richly dressed in black, relieved only by glimpses of color; Mrs. Grosvenor was in a suit of olive green, shaded in mixed fabrics, by M. Worth; the drawing-room was darkened to exclude a brilliant sun, and the general effect was dismal.

When Lady Reynolds and her niece entered, Madame St. Aignan said: "You bring us some of the sunlight from outside, Miss Reynolds; your golden hair looks like a reflection of it; and it is delightful to see an animated face." Madame le Père cast a sour look on Nelly, and mademoiselle giggled. Madame de Brissac was in the middle of a harangue which Madame de Montmorin was glad to cut short by her reception of Lady Reynolds. The conversation was flat and insignificant till Mrs. Grosvenor said: "How much more love of art exists in France than in England, and how much interest has been excited in this artistic world by the pictures of Victor Huguenay!"

A sudden buzz of talk followed this observation, and Mrs. Grosvenor was surprised at the animation she excited. In the first place English art was attacked with violence by Madame le Père, who was seeking an occasion to affront Lady Reynolds, for that agreeable widow and her lovely niece were naturally objects of jealousy; in the second place Madame St. Aignan, mortified by the indifference

of Huguenay, with whom she had attempted a flirtation, began to disparage his works. She had caught up some phrases with which she sought to annihilate him, but she understood little of painting or of anything else; a decided manner, however, may, in ordinary society, get the better of the highest intelligence, and few ventured to dispute a sentence pronounced by this shallow little coquette.

"Huguenay is an impressionist," she said, "and he values himself on his chiaroscuro, but his shadows are impossible."

Lady Reynolds ventured on a remark. "I don't know whether Huguenay is an impressionist," she observed, "but his pictures certainly give me the impression of truth."

Nelly dared not speak, for Mademoiselle le Père was fixing one of her eyes upon her. Not out of mere sportiveness was the eye fixed; Mademoiselle le Père had something to say and she said it.

"Huguenay has a romantic history—he is quite a hero of romance" (laughing): "ever so long he has been secretly affianced to the granddaughter of old Madame de la Roche Ponsin." Here Mademoiselle le Père paused to observe the effect she was producing; and Nelly's changing countenance betrayed it only too much. Lady Reynolds turned crimson. Miss Reynolds walked to the window, drew aside a curtain, looked out, and, affecting to see something worth sketching, began to cut her pencil. Mademoiselle le Père gathered herself together, scrutinizing the two English ladies, and then she said: "This young lady has been talked of as a paragon of beauty and talent. I dare say you have all heard of Sophie de la Roche?"

Lady Reynolds unfortunately started.

"Ah!" said Madame le Père, "dear Lady Reynolds is surprised, I see; and for my own part I dislike these secret betrothals—they are not fair to other girls."

"I don't believe the story," said Madame St. Aignan.

"People are free to believe or disbelieve," said Madame le Père, "but I happen to know it; I heard it from the Marquise de Lusignac, Madame de la Roche Ponsin's first cousin, and she is about as much pleased as you might expect. But, heavens! what has happened to Miss Reynolds?"

All attention now centred upon Nelly.

Her face had not been seen, her back was turned to the party while she looked out of window; but the knife with which she was cutting her pencil had slipped, and there was a gash across her hand. She was trying with a small handkerchief to stop the bleeding.

Lady Reynolds flew to her; water was brought to her speedily; many handkerchiefs were produced to bind up the hand. Miss Reynolds was whiter than the linen.

"Do you feel faint?" asked Mademoiselle le Père, in her shrill voice.

"No," said Nelly in a low, resolute tone; "not the least—a cut across the hand is nothing; I don't feel it."

"But we had best go home," said Lady Reynolds, "and dress it properly." She took Nelly round the waist as she spoke, and felt her sinking.

Miss Reynolds, however, made a great effort, and with mechanical politeness saluted each of the company before she left the room.

"She cut her finger to disguise her agitation," exclaimed Mademoiselle le Père, after her departure.

"I don't believe this thing," said Nelly on her return home; "it is a malignant lie;" but after this assertion she began to laugh and cry alternately, and when she reached her own room she tore into little bits the letter she had just finished to Sophie de la Roche.

---

From The Saturday Review.  
SPECTACLES.

THE hats, neckties, or boots of certain people seem as much parts of their persons as their noses or their whiskers; but no artificial adjuncts of the human body are so apparently identical with its nature as spectacles. We know men who seem to smile with their spectacles, to frown, to sneer, and even to eat with them. They are the most prominent features, so to speak, of their countenances, and we should miss them as much as we should miss their eyes or their ears. Indeed, it would almost seem indecent if they were to take them off. It never occurs to us for a moment that they were born without them, nor would it strike us as strange if we were to see a little spectacled face peeping out of their babies' cradles. We are, of course, referring to habitual, chronic, and incurable spectacle-wearers, and not to occasional offenders.

There are probably but few civilized people of a certain age who do not make more or less use of glasses, and we might give a worse definition of our fellow-creatures than by describing them as spectacle-wearing animals.

An observant person can scarcely have failed to notice how much and how variously the use of glasses alters the expression. With some people spectacles look what they are, mere instruments; but with others they seem part and parcel of their faces. Although the wearing of glasses always affects a person's face, we scarcely notice that they are worn by certain people. Yet there are cases in which the glasses are more conspicuous than their wearers, and we feel as if we were talking to the spectacles rather than to the human being behind them. The lenses seem to have life and spirit, and we should almost fancy we were committing manslaughter if we were to break them. Some people's spectacles have a peculiarly objectionable and impudent expression. Their wearers throw their heads back to look at one, and there is an unblushing and staring appearance about the whole arrangement, man and spectacles, which is decidedly offensive. We feel at a disadvantage, too, for it is impossible for the naked eye to assume a like air of intolerable impertinence. Then there are, on the other hand, abject spectacles, which seem cowed in one's presence. Their owners drop their heads, or slowly raise them on one side like ducks in a storm. There are strong and uncompromising-looking spectacles which it would evidently be unpleasant to dispute with, and there are weak-looking spectacles which one fancies might be easily bamboozled. There are some spectacles which look as if they wished they were not spectacles, and others which seem to take a pleasure in being spectacles, and to wish every one to be aware of the fact.

Like other things, spectacles have moved with the times. The glasses worn by our great-grandparents were something like spectacles. Those, for instance, which are depicted in the portraits of Sir Joshua Reynolds by himself, are instruments which few would be brave enough to use in these days. Their only living representatives are the heavy spectacles which are sold in out-of-the-way village shops; things with great wide rims made of tortoise-shell, silver, or brass, with double springs or holes at the ends by which to tie on the whole apparatus at

the back of the head. The spectacles of fifty years ago were heavy, cumbersome machines, almost circular, and broadly rimmed. They were about as formidable-looking as the umbrellas of the same period. In former days little trouble was taken to make glasses becoming, because they were seldom used except for old and dim eyes, for the art of being shortsighted was not discovered until some time after the invention of spectacles. Among the rural poor, even now, glasses are seldom worn except by the old and dim-sighted. Among cottagers there seems to exist a superstition that the use of spectacles gives an air of respectability if not of piety to the wearer. An open Bible with a pair of spectacles laid across it is supposed to be conclusive evidence of the sanctity of the owner, and to be more than the hardest-hearted curate or district visitor can resist. There is also something clerical in well-ordered spectacles. A parson may be most parsonic in his bearings and appearance, but his personification is intensely parsonified by the addition of spectacles. He has no sooner put them on his nose than he seems at once to have sprung from one to forty parson power. His views may have been sound before, but he looks much sounder when he has put on his spectacles. His influence is also much increased by this addition, for a creature all black cloth and gleaming spectacles is a formidable object, especially to children. Glasses again have their scholastic uses. There is a way of eying small boys through spectacles which is very awe-inspiring. Even looking over spectacles has been known to alarm people before now.

We have known charming women who wore spectacles, but, as a rule, we do not consider glasses becoming to ladies. They are apt to give a semi-masculine, semi-scholastic, semi-clerical appearance to female wearers, which is not particularly prepossessing. A stern look is unpleasant in a woman, and glasses generally give this look more or less to the wearer. We are not fond of extremes, and although we are far from agreeing with the prudish old adage that a woman should never look straight into the face of a man, we are not fond of being deliberately stared at by a spectacled lady. Most ladies' noses are not very well fitted by nature for carrying spectacles, consequently when they use glasses they are obliged to throw their heads slightly back in a manner which appears, at first sight, a little supercilious. In most cases, of

course, this appearance is unavoidable; but we fancy we have known instances in which women have gladly availed themselves of the excuse of spectacles for looking impudent. When women dislike each other they have a method of staring at one another through their spectacles which conveys more meaning than it would be possible for language to express. Glasses rarely increase the benignity of the countenance, but women can look through spectacles with a disagreeable expression which is beyond the power of the male sex. We have observed that many short-sighted ladies who never use glasses before men, make unblushing use of the most uncompromising spectacles when they are, or imagine themselves to be, exclusively in the company of their own sex. At any rate they will often merely use an eyeglass or *pince-nez* in general society, but wear regular spectacles among women. The *pince-nez* has become wonderfully fashionable of late years. If you place one alongside of a pair of spectacles on a table both appear equally harmless, but upon the nose the difference of effect is extraordinary. It is amusing to meet a person whom one has been accustomed to see in regular spectacles wearing a *pince-nez* for the first time. You hardly recognize your friend. The face looks but half clothed, and it wears a rollicking expression which is in strong contrast with the sobriety of its old spectacled days. In years gone by there were times when instruments existed somewhat similar in their construction to the *pince-nez*. They were even more hideous than the old spectacles, and were called by the euphonic name of "goggles." They stood much in the same relation to spectacles that the ancient blunderbuss did to the gun of the period.

Of late years the practice of putting children into spectacles has increased with alarming rapidity. It is melancholy to notice the number of children in the streets and schools with glazed eyes. Spectacling them may be a wholesome preventive; but it seems as if England would soon surpass Germany itself in its proportion of spectacle-wearing inhabitants. Happily there is still some shame left in our country, and there are people who are very shy about bringing out their spectacles. It is very entertaining to drop upon such as these unexpectedly. They snatch their glasses from their noses when discovered as rapidly as a monkey would do it for them, if he were to get

the chance, at the Zoological Gardens; and there is a scuttling, a hiding, and a pocketing which is deeply suggestive of the guiltiness of the wearer's conscience. We have known people who would never fairly put their spectacles on; but would hold them the wrong way, or squint through them with the springs folded, and in fact do anything rather than incur the terrible odium of being supposed to "wear spectacles." This has always seemed to us almost greater affectation than the habit of wearing an unlensed eyeglass; and it has been quite a relief to turn to the simple—though in one sense rather complicated—honesty of an esteemed friend who uses blue spectacles, an ear-trumpet, and a respirator. We own that we prefer meeting him when walking rather than when riding or driving; for, although naturally a good-looking man, when armed with the above-mentioned weapons he is an object at which a horse might excusably shy.

It is a disputed point whether artists, in painting portraits of those who habitually wear glasses, ought to introduce in their pictures the spectacles of their sitters. It is objected that when they do so the natural expression is concealed or altered, and that spectacles give an unpleasant effect. It is further urged that an artist has the right to do all he can to present his sitter in the most favorable light, and that he may even portray him in some ancient costume instead of in modern dress with good effect. On these grounds there is doubtless a great deal to be said against introducing the spectacles. On the other hand, it seems desirable that a portrait should, of all things, recall the subject to our memories, and that it should present him to posterity as he appeared to his contemporaries; therefore, when a person habitually wears spectacles, it seems most reasonable to let him wear them in his picture. Again, if you make a man who is accustomed always to wear glasses take them off, his eyes feel uncomfortable and out of focus, so that if you paint them as they then seem the effect is anything but agreeable. Perhaps of all people spectacles sit least well on Asiatics; and, as they are often short-sighted, they are much given to the use of glasses. In general, savages regard spectacles as choice personal adornments. We lately heard of a native chief in south Africa whose sole "garmenture" consisted of an old dress coat, a pair of green spectacles, and a toothbrush stuck behind his left ear.

From Nature.

## COLORS IN ART.\*

THAT a book for the instruction of artists as to the composition and purity of their pigments is much needed can hardly be denied. The difficulty, however, in writing such a book is very great; for it must either be very incomplete or contain a large amount of matter which but very few artists can understand. And no one is competent to write such a book but he who has some knowledge of painters' manipulations and a very good knowledge of chemistry; to drop the chemistry and take upon faith what has been written about the purity and nature of pigments, is hardly the method which should be adopted, and the person who does it is not likely to be a very safe guide to the artist, although he may give very many useful hints, and state much that is true. To treat of colors properly their composition must be described and the adulterations to which they are liable should be explained, which cannot be done without a certain amount of chemistry and chemical terms, and if the persons who read a book on pigments know nothing about chemistry, how can they be benefited by it? And this is difficulty number two. How is it to be overcome? Why, simply by artists learning something of chemistry. There is no other way for it. A book so incomplete as that under consideration is very misleading, because a person after reading it will know but little more about pigments than when he began. Of what use is it to know that cadmium yellow is a "sulphide of the metal cadmium," and that "emerald green is a preparation of copper," unless it be known that the elements which compose each have a decided liking for changing places, and that if these pigments are brought into contact the change will assuredly take place to the entire destruction of the tint of both of them? The real truth of the matter is that until artists will consent to become, to a certain extent, students of science, they will never get out of their difficulties, and if they will consent to this, to some of them we fear derogatory task, they will find that there is more help for them from science than they imagined: chemistry will lead to physics, and then for the first

time perhaps many of them will learn what color is, and what light and shade *really* are, and new views will burst upon them, and new methods of using their pigments will become necessary, and then pictures will be resplendent with nature's tints, and transparency will replace opacity, and nature will have some chance of being fairly represented. There are many artists who are scientific men, and there are others to whom nature has given special powers; and these show by their works that they understand or appreciate the true nature of color and of light and shade. Look at Mr. Brett's sea-pieces (he is a scientific man of note): they are bright, luminous, and true to nature, although they may not please painters of the old school, one of whom once, when asked what he thought of one of this artist's pictures, was heard to say he did not like rocks. As an illustration of one who lays no claim to be a scientific man, take Mr. Herbert's painting of "Moses" in the House of Lords, where bodies of the color nearly of the sandy background stand out from it without any tricks, with all the vivid distinctness of a stereoscopic picture.

To those who know nothing of chemistry what directions can be given for the use of paints which in themselves are stable, but which cannot be mixed with certain others? It would take a huge volume to record all the cases in which they could be used, and to note all the contingencies which might arise to influence them, and yet a little sound chemical knowledge would make the matter easy and brief. Good champagne is a good and wholesome wine, and good old port is a nectar fit for the gods, and hock and claret are cooling drinks which, with their fragrant bouquets, appeal to the imagination: all are good and wholesome; but mix them all in the same stomach at a great feast, and what will be the result, at least in most cases? Vermilion is a good and safe pigment, so is cadmium yellow, and so is emerald green; but mix them all together and what will happen? Keep the emerald green and the cadmium apart by some hard and quick-drying vehicle, and all will be well; allow a day's interval to elapse between taking the champagne and hock, and port and claret, and no inconvenience will be experienced.

It is very refreshing to read from the pen of Mr. Muckley the warning which he gives to artists to restrict the number of colors which they employ. It is to the use of bright and new tints with which

\* *A Handbook for Painters and Art Students on the Character and Use of Colors, their Permanent and Fugitive Qualities, and the Vehicles proper to Employ. Also Short Remarks on the Practice of Painting in Oil and Water-Colors.* By W. J. Muckley. London: Baillière, Tindall, & Cox, 1880.

the French color-makers tempt our artists that much of the evil complained of is due, and moreover the adulteration practised abroad, but rarely in this country, has added to it. Mr. Muckley has divided pigments into "permanent colors" and "useless pigments." Speaking of "whites," he very justly recommends zinc white as being permanent, but then he speaks of "flake white" as permanent, but confesses that it loses "its opacity by age," and that "impure air and sulphurated hydrogen turn white lead" (*i.e.* flake white) "to a dirty brown in a short time." One would hardly rank this among permanent colors. Amongst yellow he mentions "lemon yellow" as not altogether trustworthy. Now lemon yellow is chromate of baryta, and, like all other chromates, is liable to reduction by organic matter, and then, as it becomes reduced, its tint changes to green. Although he ranks this pigment among "permanent colors," he does so with a caution; why then place it in this list? "Aureolin" is also included in it; but very grave doubts are entertained of its stability in oil by many artists. It certainly resists the action of alkalies fairly well.

"Naples yellow," a pigment which portrait and figure painters have a great affection for, is now a compound made in imitation of the old paint, which consisted of antimony and lead; it was usually some time ago made with white lead tinted with some yellow pigments. If made with zinc white and cadmium, as Mr. Muckley asserts, there is not much danger in using it.

Amongst the "useless pigments" which are said to be "stable" it should be remarked that the whites, "blanc d'argent or silver white," "London and Nottingham white," are both white lead, and therefore subject to the same influences as "flake white." "Scheele's green," which is an arsenite of copper, can hardly be called a "stable" color, "but unnecessary."

"Semi-transparent colors." Amongst these is placed "cremiantz white." Why this should be it is difficult to understand, if flake white is to be ranked among permanent colors, for cremiantz white is white lead produced by precipitation.

"Prussian blue" is spoken of as not being durable; it is quite certain that it stands well sometimes, but that its hue does often fade. This must surely cause a reflecting mind to ask himself how this can be. The color is so beautiful and useful to the artist that some effort should

be made to prevent its total expulsion from his palette, and here we have an instance of the importance of chemical knowledge to the artist. It is impossible in this place to go into the question; it is however manifest if a pigment stands well at one time but not at another, that it must be mixed, in the latter case, with something which does not agree with it. Now this is true; from its composition Prussian blue is affected by anything which will change the state of oxidation in which part of its constituent iron is held. Terra verte, for example, is, or ought to be, an earth tinted with the protoxide of iron; if this is mixed with Prussian blue it will in time change the condition of the oxide of iron in the Prussian blue, and therefore its color. In concluding these remarks on pigments treated of in Mr. Muckley's book one feels great pleasure in being able to state that with the few exceptions noticed there is nothing incorrect, only one feels how terribly wanting it is in completeness when a thoroughly scientific treatment of the subject is required. One of the points which artists have to guard against is adulteration of pigments; now this is a thing of constant occurrence, where cheap colors are bought, but in this work nothing is said about this important matter. However well an artist may select his paints, impurities in one or two of them may upset all his calculations and render of no value a work which might, if sound, represent a considerable sum of money. From the present position of art in this country this is probably the most touching way of putting it. It would be well, in a future edition, if Mr. Muckley would attend to this, and give some simple methods by which the impurities could be detected.

It is as important to the artist that he should understand the nature of the vehicles with which he paints as the composition of his pigments, and here one wishes that Mr. Muckley had gone more into detail, and that he had given reasons why such substances as maguipls, mastic, sugar of lead, etc., are so very objectionable. The reason why pictures crack is because two or more media are used which dry differently; if the vehicle employed is homogeneous there is no fear of cracking. Maguipl is made by mixing linseed oil with mastic varnish, and mastic varnish is gum mastic dissolved in turpentine. When these are mixed together the turpentine goes to the oil and leaves the mastic in a jelly-like condition; the whole mass is then rubbed up together,

and in proportion as the mixture is more or less complete so will the vehicle be more or less liable to crack, because it is made up of substances which take different times in drying: All maguiups are bad ; here Mr. Muckley is right, and he is also right in advising the use of amber varnish and of good copal varnish tempered with nut (better with poppy) oil. No better media can be used than these, but the picture must be painted from first to last with one of them, whichever the artist selects, but the amber is the best. Six years ago the then professor of chemistry at the Royal Academy urged Messrs. Winsor and Newton to get amber varnish made, and that firm did so, therefore amber varnish has been to be had for that space of time, and several artists of distinction, viz., Mr. Brett, Mr. Vicat Cole, R.A., and others, have painted with it to their entire satisfaction ; nor have they complained that it is too dark to mix with their lighter colors. When a picture is perfectly hard which has been painted with this vehicle, no better varnish can be used, when required, than amber varnish properly applied, that is, in as thin a coat as possible. Mr. Muckley speaks of mastic varnish blooming, but he does not tell us why it does so. It is because the substance is hygroscopic, and taking up moisture is the cause of blooming, therefore it should never be used. All driers, as he says, are unnecessary, they are all ruinous to pictures ; under certain conditions crystallizable driers crystallize out and make the picture spotty. It would have been much more satisfactory if Mr. Muckley had treated this part of his subject at greater length and with greater minuteness ; it is evident that he is quite competent to do so. Copal is a name used by varnish-makers for several kinds of gum, and some of the cheap varnishes do not contain any of the better or harder gum. The kind used for artists' varnishes is what is termed a fossil gum, and is found largely at Zanzibar ; it is almost, if not quite, as hard as amber, and almost intractable. The best copal varnishes sold by the best artist colormen are, as a rule, made from this gum, and can be obtained from them with confidence. It is however pleasing to learn that so conscientious and respectable a firm as Messrs. Mander Brothers of Wolverhampton have undertaken to manufacture vehicles "in accordance with the old formulae supplied by the author." There is no need whatever to use sandrac, it is very brittle and unmanageable.

In the work before us "turpentine" is spoken of as being, in conjunction with colors, "detrimental to their permanence." Turpentine, which is distilled with water from coniferous trees, oxidizes and forms a resin. This it does most readily in the presence of moisture and sunlight. If then turpentine be kept free from moisture, in a well-corked bottle, in the dark, this will not happen, and the way to keep it free from moisture is to put into it lumps of quicklime or fused chloride of calcium ; when so treated it may be used with safety. One does not like to have so old a friend banished without saying a word in his defence. The suggestion made to use oil of lavender is a very good one, but it need not displace turpentine, but both must not be used together.

"The conditions under which a painter commenced his education in former times were totally different from what they are now." It would be better for art if they were the same, though perhaps not better for art regarded as a trade. The paintings of the old masters certainly beat most of the modern works in this country, both in merit and durability. Mr. Muckley's remarks on this point are very good; one only wishes that he had treated this part of his subject more fully.

The chapter on "Mixing and Nature of Colors" is not as complete as it should be, from the almost entire absence of chemical illustrations, which on such a subject are invaluable. One remark, however, which often occurs in this book is most admirable. "The painter should always make an effort to use as few colors as possible, and they should be of the most permanent kind."

On damage to oil-paintings by gas and damp, it is stated that painters' canvas is usually prepared by first covering one side of it with a coat of whiting, to which glue size has been added. This is hardly a correct statement of the method employed by the best firms. The canvas is treated with size rubbed in with long knives, in the jelly form, it is then scraped off as bare as possible. This is done to protect the canvas from the disintegrating effects of the oil used in the preparation of the surface, for oil oxidizes and speedily rots canvas, and therefore a coat of oil paint would not be, as stated, a protection to the back of prepared canvas : better use paraffin, which does not oxidize. Space will not allow a further notice of the concluding chapters of this work. One or two points, however, seem to require remark. "If darkening of a picture is due

to some chemical action in the colors themselves, which is not unfrequently the case, the original condition of the work cannot be restored." If the darkening be due to the action of sulphuretted hydrogen or white lead, the whiteness can be restored by washing with peroxide of hydrogen.

In the directions given for painting the walls of the painting-room it is advised to use Prussian blue, and the vehicle to be employed is spoken of as distemper color. Prussian blue is immediately decomposed by lime or chalk, and therefore cannot be used with these materials.

On the whole, one feels great pleasure in recommending this book as useful to art students. As has been before stated, it is matter for regret that parts of it have not been more fully treated, and at the same time it must be observed that, as regards scientific questions involved in the composition of pigments and on their action on one another, as well as the adulterations with which they are contaminated, the subject is almost wholly untouched, and we must look for some further treatise to illustrate and explain these points, either from Mr. Muckley or from some other author.

From The World.  
ÆSTHETIC TEAS.

OUR ancestors drank spirits, our grandmothers drank beer, we drink tea. It is probable that our nature is largely modified by the articles of our daily diet; and the extensive fashion of tea-drinking cannot but leave traces on the history of morals. We are now becoming more sensitive, more highly-strung, more nervous — tea is exciting; our appetites, as a rule, are more jaded, more capricious — tea is a stimulant; our refined natures turn from gross and heavy feeding — tea is a delicate drink, can be served in pretty china, and among luxurious and artistic surroundings; we are intellectually inclined — tea is a solace to the brain; our poetry is full of the weak, complaining passion, the outspring and yearning, the purely feminine constitution of the mind — tea is essentially a woman's drink. Thus, to the class who eschew realism and the plain, practical bareness of ordinary life; who desire to be intense; who look upon a sickly, sentimental cloying kind of art as the sole aim and object of existence; who sob, and burn, and

quiver; and, though pale and haggard in appearance, yet contrive to enjoy a very fair amount of pleasure and good health — to this large and ever-growing class, tea, with its concomitants of idleness, talk, and beauty, necessarily appeals very strongly.

No doubt tea-drinking is a fashion in all classes; from the washerwoman, who balances her saucer between her finger and thumb, and gulps down draughts of boiling liquid in the intervals of wringing and soap-suds, to the tously-headed lady's maid, who apes her mistress in jersey and swaddled-up throat, and who is supposed to have developed an entirely new disease, formerly unknown to doctors, solely from over indulgence in tea. But the peculiar phase of this sacred rite to which we refer at present is confined to those within the veil, or to the æsthetic clique. For many reasons, afternoon tea is best suited to them. People who talk of the nectar of the gods quite familiarly, as if it could be got round the corner like porter in a pewter pot for fourpence; whose greatest sorrows are a crumpled roseleaf; who are ethereal in their tastes and feelings, and would die if they lived in a room that was not hung with saffron or olive-green, and garnished with Morris chintzes, cannot well be imagined sitting down to a piece of boiled beef with suet dumpling, or even to roast lamb and green peas. Dinner composed of butterflies' wings and syrup of passion-flowers is not an easy combination; though we did hear of a repast the other day which was so delicious that the guests, after having eaten for an hour and a half, rose up hungry, and where nothing more substantial than a sweetbread was served; but, as a rule, tea-drinking possesses all the advantages and none of the drawbacks.

Let it not be lightly supposed, however, that an æsthetic tea merely means a few friends, a little hot water, and some tea-cups. It is a far more sacred affair — a kind of agape, or love-feast. It is given by the elect to the initiated, and one discordant element would break the magic circle. The rooms are always shaded. Darkness seems to cling, as in the Eleusinian mysteries, to the celebration of the mystic revels. Sweet scents, also, must pervade the air, for smell is the sense specially cultivated by æstheticism; the influence of odors on the nervous system being a branch of physiology highly interesting to those who have pursued it. Then, again, the tones must be low, subdued, and sad; harsh, loud laughter, and

ver  
of  
gue  
to  
liv  
but  
pas  
ble  
set  
asp  
com  
be  
inc  
be  
over  
the  
imp  
and  
ske  
it  
gue  
col  
bur  
Rou  
tech  
swa  
fine  
is b  
rat

I  
at  
fifty  
188  
and  
see  
yea  
illn

from  
hist  
Pro  
teach  
com  
time  
wher  
que

I  
Coa  
fatig  
and  
of c  
the  
thin  
the  
sup  
Coa

very buoyant spirits are vulgar. A kind of suffering melancholy hangs over the guests, as if they were rather assembled to mourn the dead than rejoice over the living. Music, of course, is permitted, but it must be of the modern order—passionate, soul-stirring, incomprehensible; the reciting of Swinburne's or Rossetti's poetry, or even that of some aspiring, long-haired, taper-fingered, waxy-complexioned member of the party, may be indulged in, but the poetry must never incline to gaiety or even to satire; it must be slow, sweet, and solemn, a rippling over of the heart's desire. Some houses there are of which the very atmosphere is impregnated with art; unfinished sketches and old prints litter the tables; an oil-sketch is propped against an easel; before it stands a bunch of flowers. Every guest uses expressions stolen from the color-box: eyes are cobalt; tresses are burnt sienna; the type of face is Greek or Roman. All things are classified by technical names, much as the humblest, sweetest-smelling little flower rejoices in a fine Latin appellation, and to the gardener it is bulbous or umbelliferous or coniferous, rather than fragrant and lovely.

From Nature.

L. F. DE POURTALES.

LOUIS FRANCOIS DE POURTALES died at Beverly Farms, Massachusetts, in the fifty-seventh year of his age, on July 17, 1880. Spite of a magnificent constitution and a manly vigor of body and mind which seemed to defy disease and to promise years of activity, he sank, after a severe illness, under an internal malady.

Educated as an engineer, he showed from boyhood a predilection for natural history. He was a favorite student of Prof. Agassiz, and when his friend and teacher came to America in 1847, he accompanied him, and remained for some time with the little band of naturalists, who, first at East Boston, and subsequently at Cambridge, shared his labors.

In 1848 Pourtales entered the U. S. Coast Survey, where his ability and indefatigable industry were at once recognized, and he remained attached to that branch of our public service for many years. He then became deeply interested in everything relating to the study of the bed of the ocean. Thanks to the enlightened support of the then superintendent of the Coast Survey, Prof. Bache, and of his

successors, Prof. Peirce and Capt. Patterson, he was enabled to devote his talents and industry to the comparatively new field of "thalassography" and the biological investigations related to it. The large collections of specimens from the sea-bottom accumulated by the different hydrographic expeditions of the U. S. Coast Survey were carefully examined by him, and the results were published, in advance of their appearance in the Coast Survey Reports, in Petermann's *Mittheilungen*, accompanied by a chart of the sea-bottom on the east coast of the United States.

So interesting and valuable were the results obtained, not only as an aid to navigation, but in their wider bearing on the history of the Gulf Stream and on the distribution of animal life at great depths, that in 1866 he was sent out by Prof. Peirce, then superintendent of the Coast Survey, to continue these investigations on a larger scale. During 1866, 1867, and 1868 he was in charge of the extensive dredging operations carried on by the U. S. Coast Survey steamer "Bibb," acting-master Platt, along the whole line of the Florida reefs and across the Straits of Florida to Cuba, Salt Key, and the Bahama Banks. The results of these expeditions, published in the Bulletin of the Museum of Comparative Zoology, excited great interest among zoologists and geologists. M. Pourtales was indeed the pioneer of deep-sea dredging in America, and he lived long enough to see that these expeditions had paved the way not only for similar English, French, and Scandinavian researches, but had led in this country to the "Hassler," and finally to the "Blake" expeditions, under the auspices of the Hon. Carlile P. Patterson, the present superintendent of our Coast Survey. On the "Hassler" expedition from Massachusetts through the Straits of Magellan to California, he had entire charge of the dredging operations; owing to circumstances beyond his control, the deep-sea explorations of that expedition were not as successful as he anticipated.

At the death of his father, M. Pourtales was left in an independent position, which allowed him to devote himself more completely than ever to his zoological studies. He resigned his official connection with the Coast Survey and returned to Cambridge, where he became thenceforth identified with the progress of the Museum of Comparative Zoology. To Prof. Agassiz his presence there was invaluable. In youth one of his favorite

pupils, throughout life his friend and colleague, he now became the support of his failing strength.

The materials of the different deep-sea dredging expeditions above-mentioned had been chiefly deposited at the museum in Cambridge, and were thence distributed to specialists in this country and in Europe. A large part of the special reports upon them have already appeared. M. Pourtales reserved to himself the corals, halcyonarians, holothurians, and crinoids. A number of his papers on the deep-sea corals of Florida, of the Caribbean Sea, and of the Gulf of Mexico have appeared in the museum publications. He had begun to work at the magnificent collection of halcyonarians made by the "Blake" in the Caribbean Sea, and had already made good progress with his final report on the holothurians. The crinoid memoirs published by him relate to a few new species of comatula and to the interesting genera *rhizocrinus* and *holopus*.

The titles of his memoirs indicate the range of his learning and his untiring industry. His devotion to science was boundless. A model worker, so quiet that his enthusiasm was known only to those who watched his steadfast labor, he toiled on year after year without a thought of self, wholly engrossed in his search after truth. He never entered into a single scientific controversy, nor ever asserted

or defended his claims to discoveries of his own which had escaped attention. But while modest to a fault and absolutely careless of his own position, he could rebuke in a peculiarly effective, though always courteous, manner ignorant pretensions or an assumption of infallibility.

Appointed keeper of the Museum of Comparative Zoology after the death of Prof. Agassiz, he devoted a large part of his time to the administration of the museum affairs. Always at his post, he passed from his original investigations to practical details, carrying out plans which he had himself helped to initiate for the growth of the institution. As he had been the devoted friend of Prof. Agassiz' father, he became to his son a wise and affectionate counsellor, without whose help in the last ten years the museum could not have taken the place it now occupies.

If he did not live to see the realization of his scientific hopes, he lived at least long enough to feel that their fulfillment is only a matter of time. He has followed Wyman and Agassiz, and like them has left his fairest monument in the work he has accomplished and the example he leaves to his successors.

ALEXANDER AGASSIZ.

CAMBRIDGE, MASS., August 2.

**EFFECT OF COLD ON THE NATIVES OF THE TROPICS.** — A striking commentary on the effect of cold upon natives of the tropics is to be found in "My Chief and I," a book just published by Chapman and Hall. Colonel Durnford, colonial engineer, was on the Drakenberg with a party of Basutos, and a number of prisoners of the Putini tribe, who were employed in stopping the passes into Natal. A snowstorm with a bitter wind came on, and at once the natives collapsed. The Putini men felt it most. Nothing could induce them to stir. They lit no fires, cooked no food. It was impossible to do anything with them even for their own comfort. At last, finding that even when the order was given to march down into the warm valley, they did not move, the colonel had the tents pulled down over their heads. Still they lay helpless, crying: "Let us die, 'Nikos; only let us die." The white men of the party were ordered to force them out, and they were found perfectly paralyzed. There was no sham about it; "their brown skins were white with cold." It was with the

greatest difficulty they were got down the mountain to the valley, where there were plenty of old bushmen's caves for them to shelter in.

Natives of the Hindustan plains are even less able to endure sudden cold than Africans are. The present writer has known cases of coolies, the honestest and most faithful messengers in the world, actually dying in the Ghauts through being caught in a piercing wind such as they, Madrasses born and bred in the low lands, had never before experienced. While therefore hasty reasoners were hard in the case of the "El Dorado" lascars, better-informed people felt that the real fault lay with those who put the poor fellows into a position for which they were by nature wholly unfitted. Let any one who has a garden try to gather a few turnips or cabbage leaves when they are covered with frozen snow, and he will be able to form some notion of what it must be for those who were nurtured in latitude fifteen degrees, to be for hours handling frozen ropes.

Chambers' Journal.